

Claim Chart for Claim 61 of 10/766,488

Ref	Title	Distinction between reference(s) and claim(s)
A1	USP4,432,604	A1 does not disclose, at least, a fiber optic module
		comprising a laser diode module to convert a laser
		diode electric signal to a laser diode optical signal.
A2	USP4,553,813	A2 through A4 do not disclose, at least, a fiber
A3	USP4,612,670	optic module comprising a laser diode driver to
A4	USP4,625,333	convert serial data received from a mother board to
		a laser diode electric signal for a laser diode.
A5	USP4,737,008	A5 does not disclose, at least, a fiber optic module
		comprising a laser diode module to convert a laser
		diode electric signal to a laser diode optical signal.
A6	USP4,911,519	A6 does not disclose, at least, a fiber optic module
		comprising a circuit board to carry thereon a
		connector, a laser diode driver, a laser diode
		module and a photo diode module.
A7	USP4,912,521	A7 through A8 do not disclose, at least, a fiber
A8	USP4,913,511	optic module comprising a laser diode driver to
		convert serial data received from a mother board to
		a laser diode electric signal for a laser diode.
A9	USP4,945,229	A9 does not disclose, at least, a fiber optic module
		comprising a laser diode module to convert a laser
		diode electric signal to a laser diode optical signal.
A10	USP4,969,924	A10 and A11 do not disclose, at least, a fiber optic
A11	USP4,979,787	module comprising a circuit board to carry thereon
		a connector, a laser diode driver, a laser diode
		module and a photo diode module.
A12	USP5,013,247	A12 through A16 do not disclose, at least, a fiber
A13	USP5,039,194	optic module comprising a laser diode driver to
A14	USP5,047,835	convert serial data received from a mother board to
A15	USP5,099,307	a laser diode electric signal for a laser diode.
A16	USP5,113,466	

Ref	Title	Distinction between reference(s) and claim(s)
B1	USP5,127,071	B1 and B2 do not disclose, at least, a fiber optic
B2		module comprising a laser diode driver to convert
}	USP5,202,943	serial data received from a mother board to a laser
ļ	, .	diode electric signal for a laser diode.
B3	USP5,243,678	B3 and B4 do not disclose, at least, a fiber optic
B4		module comprising a laser diode module to convert
	USP5,280,191	a laser diode electric signal to a laser diode optical
		signal.

B5	USP5,289,345	B5 does not disclose, at least, a fiber optic module comprising a circuit board to carry thereon a connector, a laser diode driver, a laser diode
	Y10D5 005 454	module and a photo diode module.
B6	USP5,325,454	B6 through B10 do not disclose, at least, a fiber
B7	USP5,325,455	optic module comprising a laser diode driver to convert serial data received from a mother board to
B8	USP5,337,398	
B9	USP5,432,630	a laser diode electric signal for a laser diode.
B10	USP5,452,388	
B11	USP5,475,783	This reference does not qualify as prior art. Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.
B12	USP5,515,468	B12 through B13 do not disclose, at least, a fiber
B13	USP5,526,160	optic module comprising a laser diode driver to convert serial data received from a mother board to a laser diode electric signal for a laser diode.
B14	USP5,535,034	This reference does not qualify as prior art. Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.
B15	USP5,550,941	B15 does not disclose, at least, a fiber optic module comprising a laser diode driver to convert serial data received from a mother board to a laser diode electric signal for a laser diode.
B16	USP5,561,727	This reference does not qualify as prior art. Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
C1	USP5,604,831	C1 and C2 do not disclose, at least, a fiber optic
C2		module comprising a laser diode module to convert
	USP4,727,248	a laser diode electric signal to a laser diode optical
		signal.
C3		This reference does not qualify as prior art.
	USP5,528,408	Applicants have claimed priority to Japanese
		Application No. 06-086691, filed on April 25,
		1994, in Japan.
C4	USP5,276,756	C4 through C8 do not disclose, at least, a fiber optic
C5	USP5,376,182	module comprising a laser diode driver to convert
C6	USP5,422,972	serial data received from a mother board to a laser
C7	USP5,644,668	diode electric signal for a laser diode.
C8	USP5,993,074	
C9	USP5,561,727	C9-C11 do not qualify as prior art. Applicants

C10	JP7-225327	have claimed priority to Japanese Application No.
C11	JP7-225328	06-086691, filed on April 25, 1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
D1	Hewlett-Packard, Optoelectronics Designer's Catalog, 1990.	D1 through D3 do not disclose, at least, a fiber optic module comprising a laser diode module to
D2	Sumitomo Electric Fiber Optics Corp., Product Bulletin, FDDI Optical Transceiver, ES-9217-XC, publication date unknown.	convert a laser diode electric signal to a laser diode optical signal.
D3	Sumitomo Electric, Technical Specification for FDDI Optical Transceiver Module, ES- 9217-XC, SC Duplex FDDI PMD, ES- 9210-XC, SC Duplex LCF PMD, March 25, 1993.	·
D4	Proposal for Multi-Chip Integration submitted to the Advanced Research Projects Agency dated May 11, 1993, publication date unknown.	D4 does not disclose, at least, a fiber optic module comprising a laser diode driver to convert serial data received from a mother board to a laser diode electric signal for a laser diode.
D5	Thomas & Betts, INFO-LAN Fiber Optic Map Network (IEEE 802.4) Users Manual, August 1988.	D5 through D7 do not disclose, at least, a fiber optic module comprising a laser diode module to convert a laser diode electric signal to a laser diode
D6	IBM Opto-Electronics Enterprise, RCL-2000 LCF-PMD FDDI, Preliminary Specifications, Jan. 7, 1993.	optical signal.
D7	Hewlett-Packard, FDDI 1300nm Transceiver, Technical Data, HFBR-5125, 1991.	
D8	Daniel J. Wasser, Optical Datalinks, AT&T Technical Journal, p.46-52, January/February, 1992	D8 does not disclose, at least, a fiber optic module comprising a laser diode driver to convert serial data received from a mother board to a laser diode electric signal for a laser diode.

Claim Chart for Claims 62-65 of 10/766,488

Ref	Title	Distinction between reference(s) and claim(s)
A1	USP4,432,604 USP4,553,813	A1 does not disclose, at least, a fiber optic module comprising a laser diode module including a laser diode, to convert a laser diode electric signal to a laser diode optical signal, said laser diode optical signal adapted for transmission to an optical fiber connected with said laser diode module, said laser diode optical signal having a data transmission rate of 1000 Mbits/s or more. A2 through A4 do not disclose, at least, a fiber
A3	USP4,612,670	optic module comprising a laser diode driver to
A4	USP4,625,333	convert serial data received from a mother board through a connector to a laser diode electric signal for a laser diode.
A5	USP4,737,008	A5 does not disclose, at least, a fiber optic module comprising a laser diode module including a laser diode, to convert a laser diode electric signal to a laser diode optical signal, said laser diode optical signal adapted for transmission to an optical fiber connected with said laser diode module, said laser diode optical signal having a data transmission rate of 1000 Mbits/s or more.
A6	USP4,911,519	A6 does not disclose, at least, a fiber optic module comprising a circuit board to carry thereon a connector, a laser diode driver, a laser diode module, a photo diode module and a semiconductor integrated circuit.
A7	USP4,912,521	A7 through A8 do not disclose, at least, a fiber
A8	USP4,913,511	optic module comprising a laser diode driver to convert serial data received from a mother board through a connector to a laser diode electric signal for a laser diode.
A9	USP4,945,229	A9 does not disclose, at least, a fiber optic module comprising a laser diode module including a laser diode, to convert a laser diode electric signal to a laser diode optical signal, said laser diode optical signal adapted for transmission to an optical fiber connected with said laser diode module, said laser diode optical signal having a data transmission rate of 1000 Mbits/s or more.
A10	USP4,969,924	A10 and A11 do not disclose, at least, a fiber optic
A11	USP4,979,787	module comprising a circuit board to carry thereon a connector, a laser diode driver, a laser diode

		module, a photo diode module and a semiconductor integrated circuit.
A12	USP5,013,247	A12 through A16 do not disclose, at least, a fiber
A13	USP5,039,194	optic module comprising a laser diode driver to
A14	USP5,047,835	convert serial data received from a mother board
A15	USP5,099,307	through a connector to a laser diode electric signal
A16	USP5,113,466	for a laser diode.

Ref	Title	Distinction between reference(s) and claim(s)
B1	USP5,127,071	B1 and B2 do not disclose, at least, a fiber optic
B2		module comprising a laser diode driver to convert
	USP5,202,943	serial data received from a mother board through a
	001 3,202,743	connector to a laser diode electric signal for a laser
		diode.
B3_	USP5,243,678	B3 and B4 do not disclose, at least, a fiber optic
B4		module comprising a laser diode module including
		a laser diode, to convert a laser diode electric signal
	HIGDS 200 101	to a laser diode optical signal, said laser diode
	USP5,280,191	optical signal adapted for transmission to an optical fiber connected with said laser diode module, said
		laser diode optical signal having a data
		transmission rate of 1000 Mbits/s or more
B5		B5 does not disclose, at least, a fiber optic module
ВЭ		comprising a circuit board to carry thereon a
t.	USP5,289,345	connector, a laser diode driver, a laser diode
	031 5,265,545	module, a photo diode module and a semiconductor
		integrated circuit.
B6	USP5,325,454	B6 through B10 do not disclose, at least, a fiber
B7	USP5,325,455	optic module comprising a laser diode driver to
B8	USP5,337,398	convert serial data received from a mother board
B9	USP5,432,630	through a connector to a laser diode electric signal
B10	USP5,452,388	for a laser diode.
B11		This reference does not qualify as prior art.
	11005 475 702	Applicants have claimed priority to Japanese
	USP5,475,783	Application No. 06-086691, filed on April 25,
		1994, in Japan.
B12	USP5,515,468	B12 and B13 do not disclose, at least, a fiber optic
B13	USP5,526,160	module comprising a laser diode driver to convert
		serial data received from a mother board through a
		connector to a laser diode electric signal for a laser
		diode.
D14		This reference does not qualify as prior art.
B14	11005 525 024	Applicants have claimed priority to Japanese
	USP5,535,034	Application No. 06-086691, filed on April 25,
		Application 140. 00-000071, filed on April 23,

		1994, in Japan.
B15	USP5,550,941	B15 does not disclose, at least, a fiber optic module comprising a laser diode driver to convert serial data received from a mother board to a laser diode electric signal for a laser diode.
B16	USP5,561,727	This reference does not qualify as prior art. Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
C1	USP5,604,831	C1 and C2 do not disclose, at least, a fiber optic
C2		module comprising a laser diode module including
		a laser diode, to convert a laser diode electric signal
		to a laser diode optical signal, said laser diode
	USP4,727,248	optical signal adapted for transmission to an optical
		fiber connected with said laser diode module, said
		laser diode optical signal having a data
		transmission rate of 1000 Mbits/s or more.
C3		This reference does not qualify as prior art.
USP5,528,408	11505 528 408	Applicants have claimed priority to Japanese
	Application No. 06-086691, filed on April 25,	
		1994, in Japan.
C4	USP5,276,756	C4 through C8 do not disclose, at least, a fiber optic
C5	USP5,376,182	module comprising a laser diode driver to convert
C6	USP5,422,972	serial data received from a mother board through a
C7	USP5,644,668	connector to a laser diode electric signal for a laser
C8	USP5,993,074	diode.
C9	USP5,561,727	C9-C11 do not qualify as prior art. Applicants
C10	JP7-225327	have claimed priority to Japanese Application No.
C11	JP7-225328	06-086691, filed on April 25, 1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
D1	Hewlett-Packard, Optoelectronics Designer's Catalog, 1990.	D1 through D3 do not disclose, at least, a fiber optic module comprising a laser diode module
D2	Sumitomo Electric Fiber Optics Corp., Product Bulletin, FDDI Optical Transceiver, ES-9217-XC, publication date unknown.	including a laser diode, to convert a laser diode electric signal to a laser diode optical signal, said laser diode optical signal adapted for transmission
D3	Sumitomo Electric, Technical Specification for FDDI Optical Transceiver Module, ES- 9217-XC, SC Duplex FDDI PMD, ES- 9210-XC, SC Duplex LCF PMD, March 25, 1993.	to an optical fiber connected with said laser diode module, said laser diode optical signal having a data transmission rate of 1000 Mbits/s or more.
D4	Proposal for Multi-Chip Integration submitted to the Advanced Research Projects Agency dated May 11, 1993, publication date unknown.	D4 does not disclose, at least, a fiber optic module comprising a laser diode driver to convert serial data received from a mother board through a connector to a laser diode electric signal for a laser diode.
D5	Thomas & Betts, INFO-LAN Fiber Optic Map Network (IEEE 802.4) Users Manual, August 1988.	D5 through D7 do not disclose, at least, a fiber optic module comprising a laser diode module including a laser diode, to convert a laser diode
D6	IBM Opto-Electronics Enterprise, RCL-2000 LCF-PMD FDDI, Preliminary Specifications, Jan. 7, 1993.	electric signal to a laser diode optical signal, said laser diode optical signal adapted for transmission
D7	Hewlett-Packard, FDDI 1300nm Transceiver, Technical Data, HFBR-5125, 1991.	to an optical fiber connected with said laser diode module, said laser diode optical signal having a data transmission rate of 1000 Mbits/s or more.
D8	Daniel J. Wasser, Optical Datalinks, AT&T Technical Journal, p.46-52, January/February, 1992	D8 does not disclose, at least, a fiber optic module comprising a laser diode driver to convert serial data received from a mother board through a connector to a laser diode electric signal for a laser diode.

Claim Chart for Claims 69-105 of 10/766,488

Ref	Title	Distinction between reference(s) and claim(s)
A1	USP4,432,604	A1 does not disclose, at least, a fiber optic module comprising a laser diode module having an opening
		1 • •
		adapted for insertion of one of at least one optical
	,	fiber, said laser diode module adapted to output a
		laser diode optical signal to the at least one optical
10	110D 4 552 012	fiber.
A2	USP4,553,813	A2 through A4 do not disclose, at least, a fiber
A3	USP4,612,670	optic module comprising a laser diode driver to
A4	USP4,625,333	drive a laser diode module according to serial data
1.5	11004 727 000	received from a computer through a connector.
A5	USP4,737,008	A5 does not disclose, at least, a fiber optic module
		comprising a laser diode module having an opening
		adapted for insertion of one of at least one optical
		fiber, said laser diode module adapted to output a
		laser diode optical signal to the at least one optical
1.6	11004 011 610	fiber.
A6	USP4,911,519	A6 does not disclose, at least, a fiber optic module
		comprising a sole circuit board to mount thereon a
		connector, a laser diode module, a laser diode
1.5	VIGD 4 040 504	driver, and a photo diode module.
A7	USP4,912,521	A7 and A8 do not disclose, at least, a fiber optic
A8	USP4,913,511	module comprising a laser diode driver to drive a
		laser diode module according to serial data received
10	11004 045 220	from a computer through a connector. A9 does not disclose, at least, a fiber optic module
A9	USP4,945,229	· · · · · · · · · · · · · · · · · · ·
		comprising a laser diode module having an opening
		adapted for insertion of one of at least one optical
		fiber, said laser diode module adapted to output a
		laser diode optical signal to the at least one optical fiber.
A 10	LISD4 060 024	A10 and A11 not disclose, at least, a fiber optic
A10	USP4,969,924 USP4,979,787	module comprising a sole circuit board to mount
A11	0314,7/7,/0/	thereon a connector, a laser diode module, a laser
		diode driver, and a photo diode module.
A12	USP5,013,247	A12 through A16 do not disclose, at least, a fiber
A13	USP5,039,194	optic module comprising a laser diode driver to
A14	USP5,047,835	drive a laser diode module according to serial data
A15	USP5,099,307	received from a computer through a connector.
A16	USP5,113,466	
LAIO	0313,113,400	<u> </u>

Ref	Title	Distinction between reference(s) and claim(s)
B1	USP5,127,071	B1 and B2 do not disclose, at least, a fiber optic

B2		module comprising a laser diode driver to drive a
	USP5,202,943	laser diode module according to serial data received
		from a computer through a connector.
B3	USP5,243,678	B3 and B4 do not disclose, at least, a fiber optic
B4		module comprising a laser diode module having an
		opening adapted for insertion of one of at least one
	USP5,280,191	optical fiber, said laser diode module adapted to
,		output a laser diode optical signal to the at least one
		optical fiber.
B5		B5 does not disclose, at least, a fiber optic module
	USP5,289,345	comprising a sole circuit board to mount thereon a
·	037 3,289,343	connector, a laser diode module, a laser diode
		driver, and a photo diode module.
B6	USP5,325,454	B6 through B10 do not disclose, at least, a fiber
B7	USP5,325,455	optic module comprising a laser diode driver to
B8	USP5,337,398	drive a laser diode module according to serial data
B9	USP5,432,630	received from a computer through a connector.
B10	USP5,452,388	
B11		This reference does not qualify as prior art.
	USP5,475,783	Applicants have claimed priority to Japanese
	051 5,475,765	Application No. 06-086691, filed on April 25,
		1994, in Japan.
B12	USP5,515,468	B12 and B13 do not disclose, at least, a fiber optic
B13		module comprising a laser diode driver to drive a
	USP5,526,160	laser diode module according to serial data received
		from a computer through a connector.
B14		This reference does not qualify as prior art.
	USP5,535,034	Applicants have claimed priority to Japanese
		Application No. 06-086691, filed on April 25,
Dis		1994, in Japan.
B15		B15 does not disclose, at least, a fiber optic module
		comprising a laser diode module having an opening
	USP5,550,941	adapted for insertion of one of at least one optical
		fiber, said laser diode module adapted to output a laser diode optical signal to the at least one optical
		fiber.
B16		This reference does not qualify as prior art.
סום		Applicants have claimed priority to Japanese
	USP5,561,727	Application No. 06-086691, filed on April 25,
		1994, in Japan.
L		1 2 2 13 111 0 12 111 111 111 111 111 111 111 11

Ref	Title	Distinction between reference(s) and claim(s)
C1	USP5,604,831	C1 and C2 do not disclose, at least, a fiber optic
C2	USP4,727,248	module comprising a laser diode module having an opening adapted for insertion of one of at least one

		optical fiber, said laser diode module adapted to output a laser diode optical signal to the at least one optical fiber.
C3	USP5,528,408	This reference does not qualify as prior art. Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.
C4	USP5,276,756	C4 through C8 do not disclose, at least, a fiber optic
C5	USP5,376,182	module comprising a laser diode driver to drive a
C6	USP5,422,972	laser diode module according to serial data received
C7	USP5,644,668	from a computer through a connector.
C8	USP5,993,074	
C9	USP5,561,727	C9-C11 do not qualify as prior art. Applicants have
C10	JP7-225327	claimed priority to Japanese Application No. 06-
C11	JP7-225328	086691, filed on April 25, 1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
D1	Hewlett-Packard, Optoelectronics Designer's Catalog, 1990.	D1 through D3 do not disclose, at least, a fiber optic module comprising a laser diode module
D2	Sumitomo Electric Fiber Optics Corp., Product Bulletin, FDDI Optical Transceiver, ES-9217-XC, publication date unknown.	having an opening adapted for insertion of one of at least one optical fiber, said laser diode module adapted to output a laser diode optical signal to the
D3	Sumitomo Electric, Technical Specification for FDDI Optical Transceiver Module, ES- 9217-XC, SC Duplex FDDI PMD, ES- 9210-XC, SC Duplex LCF PMD, March 25, 1993.	at least one optical fiber.
D4	Proposal for Multi-Chip Integration submitted to the Advanced Research Projects Agency dated May 11, 1993, publication date unknown.	D4 does not disclose, at least, a fiber optic module comprising a laser diode module having an opening adapted for insertion of one of at least one optical fiber.
D5	Thomas & Betts, INFO-LAN Fiber Optic Map Network (IEEE 802.4) Users Manual, August 1988.	D5 through D7 do not disclose, at least, a fiber optic module comprising a laser diode module having an opening adapted for insertion of one of at
D6	IBM Opto-Electronics Enterprise, RCL-2000 LCF-PMD FDDI, Preliminary Specifications, Jan. 7, 1993.	least one optical fiber, said laser diode module adapted to output a laser diode optical signal to the
D7	Hewlett-Packard, FDDI 1300nm Transceiver, Technical Data, HFBR-5125, 1991.	at least one optical fiber.
D8	Daniel J. Wasser, Optical Datalinks, AT&T Technical Journal, p.46-52, January/February, 1992	D8 does not disclose, at least, a fiber optic module comprising a laser diode driver to drive a laser diode module according to serial data received from a computer through a connector.

Claim Chart for Claims 106-121 of 10/766,488

Ref	Title	Distinction between reference(s) and claim(s)
Al	USP4,432,604	A1 does not disclose, at least, an optical module comprising a laser diode module to convert a laser diode electrical signal into a laser diode optical signal and transmit the laser diode optical signal, which is transmitted at a data transmission rate of 1000Mbits/s or more.
A2	USP4,553,813	A2 through A4 do not disclose, at least, an optical
A3	USP4,612,670	module comprising a laser diode electrical signal
A4	USP4,625,333	converter to convert serial data, received from a mother board, into a laser diode electrical signal.
A5	USP4,737,008	A5 does not disclose, at least, an optical module comprising a laser diode module to convert a laser diode electrical signal into a laser diode optical signal and transmit the laser diode optical signal, which is transmitted at a data transmission rate of 1000Mbits/s or more.
A6	USP4,911,519	A6 does not disclose, at least, an optical module comprising a single circuit board, on which a serial connector and a laser diode electrical signal converter are mounted and to which a laser diode and a photo diode module are electrically connected proximate to a first edge of the circuit board.
A7	USP4,912,521	A7 and A8 do not disclose, at least, an optical
A8	USP4,913,511	module comprising a laser diode electrical signal converter to convert serial data, received from a mother board, into a laser diode electrical signal.
A9	USP4,945,229	A9 does not disclose, at least, an optical module comprising a laser diode module to convert a laser diode electrical signal into a laser diode optical signal and transmit the laser diode optical signal, which is transmitted at a data transmission rate of 1000Mbits/s or more.
A10	USP4,969,924	A10 and A11 do not disclose, at least, an optical
A11	USP4,979,787	module comprising a single circuit board, on which a serial connector and a laser diode electrical signal converter are mounted and to which a laser diode and a photo diode module are electrically connected proximate to a first edge of the circuit board.
A12	USP5,013,247	A12 through A16 do not disclose, at least, an
A13	USP5,039,194	optical module comprising a laser diode electrical
A14	USP5,047,835	signal converter to convert serial data, received

A15	USP5,099,307	from a mother board, into a laser diode electrical
A16	USP5,113,466	signal.

Ref	Title	Distinction between reference(s) and claim(s)
B1	USP5,127,071	B1 and B2 do not disclose, at least, an optical
B2		module comprising a laser diode electrical signal
	USP5,202,943	converter to convert serial data, received from a
		mother board, into a laser diode electrical signal.
B3	USP5,243,678	B3 and B4 do not disclose, at least, an optical
B4		module comprising a laser diode module to convert
		a laser diode electrical signal into a laser diode
	USP5,280,191	optical signal and transmit the laser diode optical
		signal, which is transmitted at a data transmission
		rate of 1000Mbits/s or more.
B5		B5 does not disclose, at least, an optical module
		comprising a single circuit board, on which a serial
		connector and a laser diode electrical signal
	USP5,289,345	converter are mounted and to which a laser diode
		and a photo diode module are electrically
İ		connected proximate to a first edge of the circuit board.
D.C	HODE 225 454	B6 through B10 do not disclose, at least, an optical
B6	USP5,325,454	module comprising a laser diode electrical signal
B7 B8	USP5,325,455 USP5,337,398	converter to convert serial data, received from a
B9	USP5,432,630	mother board, into a laser diode electrical signal.
B10	USP5,452,388	momer court, into a laser areas electrical signal.
B11	USF3,432,386	This reference does not qualify as prior art.
BII		Applicants have claimed priority to Japanese
	USP5,475,783	Application No. 06-086691, filed on April 25,
		1994, in Japan.
B12	USP5,515,468	B12 and B13 do not disclose, at least, an optical
B13		module comprising a laser diode electrical signal
	USP5,526,160	converter to convert serial data, received from a
		mother board, into a laser diode electrical signal.
B14		This reference does not qualify as prior art.
	USP5,535,034	Applicants have claimed priority to Japanese
	051 3,333,037	Application No. 06-086691, filed on April 25,
		1994, in Japan.
B15		B15 does not disclose, at least, an optical module
	USP5,550,941	comprising a laser diode module to convert a laser
		diode electrical signal into a laser diode optical
		signal and transmit the laser diode optical signal,
		which is transmitted at a data transmission rate of
D16	LICDS 541 727	1000Mbits/s or more.
B16	USP5,561,727	This reference does not qualify as prior art.

Applicants have claimed priority to Japanese
Application No. 06-086691, filed on April 25,
1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
C1	USP5,604,831	C1 and C2 do not disclose, at least, an optical
C2	USP4,727,248	module comprising a laser diode module to convert a laser diode electrical signal into a laser diode optical signal and transmit the laser diode optical signal, which is transmitted at a data transmission rate of 1000Mbits/s or more.
C3	USP5,528,408	This reference does not qualify as prior art. Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.
C4	USP5,276,756	C4 through C8 do not disclose, at least, an optical
C5	USP5,376,182	module comprising a laser diode electrical signal
C6	USP5,422,972	converter to convert serial data, received from a
C7	USP5,644,668	mother board, into a laser diode electrical signal.
C8	USP5,993,074	
C9	USP5,561,727	C9-C11 do not qualify as prior art. Applicants have
C10	JP7-225327	claimed priority to Japanese Application No. 06-
C11	JP7-225328	086691, filed on April 25, 1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
D1	Hewlett-Packard, Optoelectronics	D1 through D3 do not disclose, at least, an optical
D2	Designer's Catalog, 1990. Sumitomo Electric Fiber Optics Corp., Product Bulletin, FDDI Optical Transceiver, ES-9217-XC, publication date unknown.	module comprising a laser diode module to convert a laser diode electrical signal into a laser diode optical signal and transmit the laser diode optical signal, which is transmitted at a data transmission
D3	Sumitomo Electric, Technical Specification for FDDI Optical Transceiver Module, ES-9217-XC, SC Duplex FDDI PMD, ES-9210-XC, SC Duplex LCF PMD, March 25, 1993.	rate of 1000Mbits/s or more.
D4	Proposal for Multi-Chip Integration submitted to the Advanced Research Projects Agency dated May 11, 1993, publication date unknown.	D4 does not disclose, at least, an optical module comprising a laser diode module and a photo diode module being electrically connected to a circuit board proximate to a first edge of the circuit board that is opposite a second edge of the circuit board, which a serial connector is positioned proximate to.
D5	Thomas & Betts, INFO-LAN Fiber Optic Map Network (IEEE 802.4) Users Manual, August 1988.	D5 through D7 do not disclose, at least, an optical module comprising a laser diode module to convert a laser diode electrical signal into a laser diode
D6	IBM Opto-Electronics Enterprise, RCL-	optical signal and transmit the laser diode optical

D7	2000 LCF-PMD FDDI, Preliminary Specifications, Jan. 7, 1993. Hewlett-Packard, FDDI 1300nm Transceiver, Technical Data, HFBR-5125, 1991.	signal, which is transmitted at a data transmission rate of 1000Mbits/s or more.
D8	Daniel J. Wasser, Optical Datalinks, AT&T Technical Journal, p.46-52, January/February, 1992	D8 does not disclose, at least, an optical module comprising a serial connector being positioned proximate to a second edge of a circuit board that is opposite a first edge of the circuit board, which a laser diode module and a photo diode module are electrically connected to the circuit board proximate to.

Claim Chart for Claims 122-127 of 10/766,488

Ref	Title	Distinction between reference(s) and claim(s)
A1	USP4,432,604	A1 through A16 do not disclose, at least, a module
A2	USP4,553,813	cap comprising a first elastic part to protect a laser
A3	USP4,612,670	diode module and a second elastic part to protect a
A4	USP4,625,333	photo diode module, such that foreign matter is
A5	USP4,737,008	prevented from invading into a first opening of the
A6	USP4,911,519	laser diode module and a second opening of the
A7	USP4,912,521	photo diode module when the module cap is
A8	USP4,913,511	removably attached to an optical module.
A9	USP4,945,229	
A10	USP4,969,924	
A11	USP4,979,787	
A12	USP5,013,247	
A13	USP5,039,194	·
A14	USP5,047,835	
A15	USP5,099,307	
A16	USP5,113,466	

Ref	Title	Distinction between reference(s) and claim(s)
B1	USP5,127,071	B1 through B10 do not disclose, at least, a module
B2	USP5,202,943	cap comprising a first elastic part to protect a laser
B3	USP5,243,678	diode module and a second elastic part to protect a
B4	USP5,280,191	photo diode module, such that foreign matter is
B5	USP5,289,345	prevented from invading into a first opening of the
B6	USP5,325,454	laser diode module and a second opening of the
B7	USP5,325,455	photo diode module when the module cap is
B8	USP5,337,398	removably attached to an optical module.
B9	USP5,432,630	
B10	USP5,452,388	
B11	USP5,475,783	This reference does not qualify as prior art. Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.
B12	USP5,515,468	B12 and B13 do not disclose, at least, a module cap
B13	USP5,526,160	comprising a first elastic part to protect a laser diode module and a second elastic part to protect a photo diode module, such that foreign matter is prevented from invading into a first opening of the laser diode module and a second opening of the photo diode module when the module cap is removably attached to an optical module.
B14	USP5,535,034	This reference does not qualify as prior art.

		Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.
B15	USP5,550,941	B15 does not disclose, at least, a module cap comprising a first elastic part to protect a laser diode module and a second elastic part to protect a photo diode module, such that foreign matter is prevented from invading into a first opening of the laser diode module and a second opening of the photo diode module when the module cap is removably attached to an optical module.
B16	USP5,561,727	This reference does not qualify as prior art. Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
C1	USP5,604,831	C1 and C2 do not disclose, at least, a module cap
C2		comprising a first elastic part to protect a laser
		diode module and a second elastic part to protect a
	•	photo diode module, such that foreign matter is
	USP4,727,248	prevented from invading into a first opening of the
		laser diode module and a second opening of the
		photo diode module when the module cap is
		removably attached to an optical module.
C3		This reference does not qualify as prior art.
	USP5,528,408	Applicants have claimed priority to Japanese
	031 3,328,408	Application No. 06-086691, filed on April 25,
		1994, in Japan.
C4	USP5,276,756	C4 through C8 do not disclose, at least, a module
C5	USP5,376,182	cap comprising a first elastic part to protect a laser
C6	USP5,422,972	diode module and a second elastic part to protect a
C7	USP5,644,668	photo diode module, such that foreign matter is
C8		prevented from invading into a first opening of the
	USP5,993,074	laser diode module and a second opening of the
		photo diode module when the module cap is
		removably attached to an optical module.
<u>C9</u>	USP5,561,727	C9-C11 do not qualify as prior art. Applicants have
C10	JP7-225327	claimed priority to Japanese Application No. 06-
C11	JP7-225328	086691, filed on April 25, 1994, in Japan.

prevented from invading into a first opening of the
laser diode module and a second opening of the photo diode module when the module cap is
 removably attached to an optical module.

Ref	Title	Distinction between reference(s) and claim(s)
D1	Hewlett-Packard, Optoelectronics Designer's Catalog, 1990.	D1 through D8 do not disclose, at least, a module cap comprising a first elastic part to protect a laser
D2	Sumitomo Electric Fiber Optics Corp., Product Bulletin, FDDI Optical Transceiver, ES-9217-XC, publication date unknown.	diode module and a second elastic part to protect a photo diode module, such that foreign matter is prevented from invading into a first opening of the
D3	Sumitomo Electric, Technical Specification for FDDI Optical Transceiver Module, ES- 9217-XC, SC Duplex FDDI PMD, ES- 9210-XC, SC Duplex LCF PMD, March 25, 1993.	laser diode module and a second opening of the photo diode module when the module cap is removably attached to an optical module.
D4	Proposal for Multi-Chip Integration submitted to the Advanced Research Projects Agency dated May 11, 1993, publication date unknown.	
D5	Thomas & Betts, INFO-LAN Fiber Optic Map Network (IEEE 802.4) Users Manual, August 1988.	·
D6	IBM Opto-Electronics Enterprise, RCL-2000 LCF-PMD FDDI, Preliminary Specifications, Jan. 7, 1993.	
D7	Hewlett-Packard, FDDI 1300nm Transceiver, Technical Data, HFBR-5125, 1991.	
D8	Daniel J. Wasser, Optical Datalinks, AT&T Technical Journal, p.46-52, January/February, 1992	

Claim Chart for Claims 128-138 of 10/766,488

Ref	Title	Distinction between reference(s) and claim(s)
A1	USP4,432,604	A1 does not disclose, at least, an optical module comprising a laser diode module including a laser diode, to convert a laser diode electrical signal into a laser diode optical signal, which adapted for transmission to an optical fiber the laser diode optical signal having a data transmission rate of 1000 Mbits/s or more.
A2	USP4,553,813	A2 through A4 do not disclose, at least, an optical
A3	USP4,612,670	module comprising a laser diode driver to convert
A4	USP4,625,333	serial data received through a surface mount type connector to a laser diode electrical signal for a laser diode.
A5	USP4,737,008	A5 does not disclose, at least, an optical module comprising a laser diode module including a laser diode, to convert a laser diode electrical signal into a laser diode optical signal, which adapted for transmission to an optical fiber the laser diode optical signal having a data transmission rate of 1000 Mbits/s or more.
A6	USP4,911,519	A6 does not disclose, at least, an optical module comprising a sole circuit board to mount thereon a surface mount type connector, a laser diode driver, a laser diode module, a photo diode module and a semiconductor integrated circuit.
A7	USP4,912,521	A7 and A8 do not disclose, at least, an optical
A8	USP4,913,511	module comprising a laser diode driver to convert serial data received through a surface mount type connector to a laser diode electrical signal for a laser diode.
A9	USP4,945,229	A9 does not disclose, at least, an optical module comprising a laser diode module including a laser diode, to convert a laser diode electrical signal into a laser diode optical signal, which adapted for transmission to an optical fiber the laser diode optical signal having a data transmission rate of 1000 Mbits/s or more.
A10	USP4,969,924	A10 and A11 do not disclose, at least, an optical
A11	USP4,979,787	module comprising a sole circuit board to mount thereon a surface mount type connector, a laser diode driver, a laser diode module, a photo diode module and a semiconductor integrated circuit.
A12	USP5,013,247	A12 through A16 do not disclose, at least, an
A13	USP5,039,194	optical module comprising a laser diode driver to

A14	USP5,047,835	convert serial data received through a surface
A15		mount type connector to a laser diode electrical
A16	USP5,113,466	signal for a laser diode.

Ref	Title	Distinction between reference(s) and claim(s)
B1	USP5,127,071	B1 and B2 do not disclose, at least, an optical
B2		module comprising a laser diode driver to convert
	USP5,202,943	serial data received through a surface mount type
	031 3,202,943	connector to a laser diode electrical signal for a
		laser diode.
B3	USP5,243,678	B3 and B4 do not disclose, at least, an optical
B4		module comprising a laser diode module including
		a laser diode, to convert a laser diode electrical
	USP5,280,191	signal into a laser diode optical signal, which
		adapted for transmission to an optical fiber the laser
		diode optical signal having a data transmission rate of 1000 Mbits/s or more.
B5		B5 does not disclose, at least, an optical module
60		comprising a sole circuit board to mount thereon a
	USP5,289,345	surface mount type connector, a laser diode driver,
	001 3,207,3 13	a laser diode module, a photo diode module and a
		semiconductor integrated circuit.
B6	USP5,325,454	B6 through B10 do not disclose, at least, an optical
B7	USP5,325,455	module comprising a laser diode driver to convert
B8	USP5,337,398	serial data received through a surface mount type
B9	USP5,432,630	connector to a laser diode electrical signal for a
B10	USP5,452,388	laser diode.
B11		This reference does not qualify as prior art.
	USP5,475,783	Applicants have claimed priority to Japanese
	USF3,473,783	Application No. 06-086691, filed on April 25,
		1994, in Japan.
B12	USP5,515,468	B12 through B13 do not disclose, at least, an
B13		optical module comprising a laser diode driver to
	USP5,526,160	convert serial data received through a surface
	, ,	mount type connector to a laser diode electrical signal for a laser diode.
B14		This reference does not qualify as prior art.
D14		Applicants have claimed priority to Japanese
	USP5,535,034	Application No. 06-086691, filed on April 25,
		1994, in Japan.
B15		B15 does not disclose, at least, an optical module
	USP5,550,941	comprising a laser diode module including a laser
		diode, to convert a laser diode electrical signal into
		a laser diode optical signal, which adapted for
		transmission to an optical fiber the laser diode

		optical signal having a data transmission rate of 1000 Mbits/s or more.
B16	USP5,561,727	This reference does not qualify as prior art. Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
C1	USP5,604,831	C1 and C2 do not disclose, at least, an optical
C2		module comprising a laser diode module including
		a laser diode, to convert a laser diode electrical
	USP4,727,248	signal into a laser diode optical signal, which
	0574,727,246	adapted for transmission to an optical fiber the laser
		diode optical signal having a data transmission rate
		of 1000 Mbits/s or more.
C3		This reference does not qualify as prior art.
	USP5,528,408	Applicants have claimed priority to Japanese
		Application No. 06-086691, filed on April 25,
		1994, in Japan.
C4	USP5,276,756	C4 through C8 do not disclose, at least, an optical
C5	USP5,376,182	module comprising a laser diode driver to convert
C6	USP5,422,972	serial data received through a surface mount type
C7	USP5,644,668	connector to a laser diode electrical signal for a
C8	USP5,993,074	laser diode.
C9	USP5,561,727	C9-C11 do not qualify as prior art. Applicants have
C10	JP7-225327	claimed priority to Japanese Application No. 06-
C11	JP7-225328	086691, filed on April 25, 1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
D1	Hewlett-Packard, Optoelectronics Designer's Catalog, 1990.	D1 through D3 do not disclose, at least, an optical module comprising a laser diode module including
D2	Sumitomo Electric Fiber Optics Corp., Product Bulletin, FDDI Optical Transceiver, ES-9217-XC, publication date unknown.	said laser diode, to convert said laser diode electrical signal into a laser diode optical signal, said laser diode optical signal adapted for
D3	Sumitomo Electric, Technical Specification for FDDI Optical Transceiver Module, ES-9217-XC, SC Duplex FDDI PMD, ES-9210-XC, SC Duplex LCF PMD, March 25, 1993.	transmission to an optical fiber said laser diode optical signal having a data transmission rate of 1000 Mbits/s or more.
D4	Proposal for Multi-Chip Integration submitted to the Advanced Research Projects Agency dated May 11, 1993, publication date unknown.	D4 does not disclose, at least, an optical module comprising a laser diode driver to convert serial data received through a surface mount type connector to a laser diode electrical signal for a laser diode.
D5	Thomas & Betts, INFO-LAN Fiber Optic Map Network (IEEE 802.4) Users Manual, August 1988.	D5 through D7 do not disclose, at least, an optical module comprising a laser diode module including
D6	IBM Opto-Electronics Enterprise, RCL-2000 LCF-PMD FDDI, Preliminary Specifications, Jan. 7, 1993.	a laser diode, to convert a laser diode electrical signal into a laser diode optical signal, which adapted for transmission to an optical fiber the laser
D7	Hewlett-Packard, FDDI 1300nm Transceiver, Technical Data, HFBR-5125, 1991.	diode optical signal having a data transmission rate of 1000 Mbits/s or more.
D8	Daniel J. Wasser, Optical Datalinks, AT&T Technical Journal, p.46-52, January/February, 1992	D8 does not disclose, at least, an optical module comprising a laser diode driver to convert serial data received through a surface mount type connector to a laser diode electrical signal for a laser diode.

Claim Chart for Claims 139-157 of 10/766,488

Ref	Title	Distinction between reference(s) and claim(s)
A1	USP4,432,604	A1 does not disclose, at least, an optical module
		comprising a laser diode module to convert a laser
		diode electrical signal into a laser diode optical
		signal and transmit the laser diode optical signal.
A2	USP4,553,813	A2 through A4 do not disclose, at least, an optical
A3	USP4,612,670	module comprising a laser diode electrical signal
A4	USP4,625,333	converter to convert serial data, which a serial
		connector transfers, into a laser diode electrical
		signal.
A5	USP4,737,008	A5 does not disclose, at least, an optical module
		comprising a laser diode module to convert a laser
		diode electrical signal into a laser diode optical
		signal and transmit the laser diode optical signal.
A6	USP4,911,519	A6 does not disclose, at least, an optical module
		comprising a single circuit board, on which a laser
		diode electrical signal converter are mounted and to
		which a laser diode module and a photo diode
		module are electrically connected proximate to a
		first edge of the circuit board.
A7	USP4,912,521	A7 and A8 do not disclose, at least, an optical
A8	USP4,913,511	module comprising a laser diode electrical signal
		converter to convert serial data, which a serial
		connector transfers, into a laser diode electrical
10	Y100 4 0 4 5 000	signal.
A9	USP4,945,229	A9 does not disclose, at least, an optical module
		comprising a laser diode module to convert a laser
		diode electrical signal into a laser diode optical
410	11004.000.004	signal and transmit the laser diode optical signal.
A10	USP4,969,924	A10 and A11 do not disclose, at least, an optical
A11	USP4,979,787	module comprising a single circuit board, on which a laser diode electrical signal converter are
		mounted and to which a laser diode module and a
		photo diode module are electrically connected
		proximate to a first edge of the circuit board.
A12	USP5,013,247	A12 through A16 do not disclose, at least, an
A12	USP5,039,194	optical module comprising a laser diode electrical
A13	USP5,047,835	signal converter to convert serial data, which a
A14	USP5,099,307	serial connector transfers, into a laser diode
		electrical signal.
A16	USP5,113,466	

Ref	Title	Distinction between reference(s) and claim(s)
B1	USP5,127,071	B1 and B2 do not disclose, at least, an optical

B2	USP5,202,943	module comprising a laser diode electrical signal converter to convert serial data, which a serial connector transfers, into a laser diode electrical signal.
B3	USP5,243,678	B3 and B4 do not disclose, at least, an optical
B4	USP5,280,191	module comprising a laser diode module to convert a laser diode electrical signal into a laser diode optical signal and transmit the laser diode optical signal.
B5	USP5,289,345	B5 does not disclose, at least, an optical module comprising a single circuit board, on which a laser diode electrical signal converter are mounted and to which a laser diode module and a photo diode module are electrically connected proximate to a first edge of the circuit board.
B6	USP5,325,454	B6 through B10 do not disclose, at least, an optical
B7	USP5,325,455	module comprising a laser diode electrical signal
B8	USP5,337,398	converter to convert serial data, which a serial
B9	USP5,432,630	connector transfers, into a laser diode electrical
B10	USP5,452,388	signal.
B11	USP5,475,783	This reference does not qualify as prior art. Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.
B12	USP5,515,468	B12 and B13 do not disclose, at least, an optical
B13	USP5,526,160	module comprising a laser diode electrical signal converter to convert serial data, which a serial connector transfers, into a laser diode electrical signal.
B14	USP5,535,034	This reference does not qualify as prior art. Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.
B15	USP5,550,941	B15 does not disclose, at least, an optical module comprising a laser diode module to convert a laser diode electrical signal into a laser diode optical signal and transmit the laser diode optical signal.
B16	USP5,561,727	This reference does not qualify as prior art. Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
C1	USP5,604,831	C1 and C2 do not disclose, at least, an optical
C2	USP4,727,248	module comprising a laser diode module to convert

		a laser diode electrical signal into a laser diode optical signal and transmit the laser diode optical signal.
C3	USP5,528,408	This reference does not qualify as prior art. Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.
C4	USP5,276,756	C4 through C8 do not disclose, at least, an optical
C5	USP5,376,182	module comprising a laser diode electrical signal
C6	USP5,422,972	converter to convert serial data, which a serial
C7	USP5,644,668	connector transfers, into a laser diode electrical
C8	USP5,993,074	signal.
C9	USP5,561,727	C9-C11 do not qualify as prior art. Applicants have
C10	JP7-225327	claimed priority to Japanese Application No. 06-
C11	JP7-225328	086691, filed on April 25, 1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
D1	Hewlett-Packard, Optoelectronics Designer's Catalog, 1990.	D1 through D3 do not disclose, at least, an optical module comprising a laser diode module to convert
D2	Sumitomo Electric Fiber Optics Corp., Product Bulletin, FDDI Optical Transceiver, ES-9217-XC, publication date unknown.	a laser diode electrical signal into a laser diode optical signal and transmit the laser diode optical signal.
D3	Sumitomo Electric, Technical Specification for FDDI Optical Transceiver Module, ES- 9217-XC, SC Duplex FDDI PMD, ES- 9210-XC, SC Duplex LCF PMD, March 25, 1993.	
D4	Proposal for Multi-Chip Integration submitted to the Advanced Research Projects Agency dated May 11, 1993, publication date unknown.	D4 does not disclose, at least, an optical module comprising a laser diode module and a photo diode module being electrically connected to a circuit board proximate to a first edge of the circuit board that is opposite a second edge of the circuit board, which a serial connector is positioned proximate to.
D5	Thomas & Betts, INFO-LAN Fiber Optic Map Network (IEEE 802.4) Users Manual, August 1988.	D5 through D7 do not disclose, at least, an optical module comprising a laser diode module to convert a laser diode electrical signal into a laser diode
D6	IBM Opto-Electronics Enterprise, RCL-2000 LCF-PMD FDDI, Preliminary Specifications, Jan. 7, 1993.	optical signal and transmit the laser diode optical signal.
D7	Hewlett-Packard, FDDI 1300nm Transceiver, Technical Data, HFBR-5125, 1991.	
D8	Daniel J. Wasser, Optical Datalinks, AT&T Technical Journal, p.46-52, January/February, 1992	D8 does not disclose, at least, a serial connector being positioned proximate to a second edge of a circuit board that is opposite a first edge of the

circuit board, which a laser diode module and a photo diode module are electrically connected to
 the circuit board proximate to.

Claim Chart for Claims 158 of 10/766,488

Ref	Title	Distinction between reference(s) and claim(s)
Al	USP4,432,604	Al through Al6 do not disclose, at least, a module
A2	USP4,553,813	cap comprising a first elastic part to protect a laser
A3	USP4,612,670	diode module and a second elastic part to protect a
A4	USP4,625,333	photo diode module, and being removably
A5	USP4,737,008	attachable to an optical module.
A6	USP4,911,519	
A7	USP4,912,521	
A8	USP4,913,511	
A9	USP4,945,229	
A10	USP4,969,924	
A11	USP4,979,787	
A12	USP5,013,247	
A13	USP5,039,194	·
A14	USP5,047,835	
A15	USP5,099,307	
A16	USP5,113,466	

Ref	Title	Distinction between reference(s) and claim(s)
B1	USP5,127,071	B1 through B10 do not disclose, at least, a module
B2	USP5,202,943	cap comprising a first elastic part to protect a laser
B3	USP5,243,678	diode module and a second elastic part to protect a
B4	USP5,280,191	photo diode module, and being removably
B5	USP5,289,345	attachable to an optical module.
B6	USP5,325,454	
B7	USP5,325,455	
B8_	USP5,337,398	_
B9	USP5,432,630	
B10	USP5,452,388	
B11	USP5,475,783	This reference does not qualify as prior art. Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.
B12	USP5,515,468	B12 and B13 do not disclose, at least, a module cap
B13	USP5,526,160	comprising a first elastic part to protect a laser diode module and a second elastic part to protect a photo diode module, and being removably attachable to an optical module.
B14	USP5,535,034	This reference does not qualify as prior art. Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.

B15		B15 does not disclose, at least, a module cap
		comprising a first elastic part to protect a laser
	USP5,550,941	diode module and a second elastic part to protect a
		photo diode module, and being removably
		attachable to an optical module.
B16		This reference does not qualify as prior art.
	11005 561 727	Applicants have claimed priority to Japanese
	USP5,561,727	Application No. 06-086691, filed on April 25,
		1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
C1	USP5,604,831	C1 and C2 do not disclose, at least, a module cap
C2	USP4,727,248	comprising a first elastic part to protect a laser diode module and a second elastic part to protect a photo diode module, and being removably attachable to an optical module.
C3	USP5,528,408	This reference does not qualify as prior art. Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.
C4	USP5,276,756	C4 through C8 do not disclose, at least, a module
C5	USP5,376,182	cap comprising a first elastic part to protect a laser
C6	USP5,422,972	diode module and a second elastic part to protect a
C7	USP5,644,668	photo diode module, and being removably
C8	USP5,993,074	attachable to an optical module.
C9	USP5,561,727	C9-C11 do not qualify as prior art. Applicants have
C10	JP7-225327	claimed priority to Japanese Application No. 06-
C11	JP7-225328	086691, filed on April 25, 1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
D1	Hewlett-Packard, Optoelectronics Designer's Catalog, 1990.	D1 through D8 do not disclose, at least, a module cap comprising a first elastic part to protect a laser
D2	Sumitomo Electric Fiber Optics Corp., Product Bulletin, FDDI Optical Transceiver, ES-9217-XC, publication date unknown.	diode module and a second elastic part to protect a photo diode module, and being removably attachable to an optical module.
D3	Sumitomo Electric, Technical Specification for FDDI Optical Transceiver Module, ES- 9217-XC, SC Duplex FDDI PMD, ES- 9210-XC, SC Duplex LCF PMD, March 25, 1993.	
D4	Proposal for Multi-Chip Integration submitted to the Advanced Research Projects Agency dated May 11, 1993, publication date unknown.	·
D5	Thomas & Betts, INFO-LAN Fiber Optic Map Network (IEEE 802.4) Users Manual, August 1988.	
D6	IBM Opto-Electronics Enterprise, RCL-2000 LCF-PMD FDDI, Preliminary Specifications, Jan. 7, 1993.	
D7	Hewlett-Packard, FDDI 1300nm Transceiver, Technical Data, HFBR-5125, 1991.	·
D8	Daniel J. Wasser, Optical Datalinks, AT&T Technical Journal, p.46-52, January/February, 1992	

Claim Chart for Claims 159-162 of 10/766,488

Ref	Title	Distinction between reference(s) and claim(s)
A1	USP4,432,604	A1 through A16 do not disclose, at least, a module
A2	USP4,553,813	cap comprising a first elastic part to protect a laser
A3	USP4,612,670	diode module and a second elastic part to protect a
A4	USP4,625,333	photo diode module, such that the first elastic part
A5	USP4,737,008	and the second elastic part protect the laser diode
A6	USP4,911,519	module and the photo diode module from foreign
A7	USP4,912,521	matter when the module cap is removably attached
A8	USP4,913,511	to an optical module.
A9	USP4,945,229	
A10	USP4,969,924	
A11	USP4,979,787	
A12	USP5,013,247	·
A13	USP5,039,194	
A14	USP5,047,835	
A15	USP5,099,307	
A16	USP5,113,466	

Ref	Title	Distinction between reference(s) and claim(s)
B1	USP5,127,071	B1 through B10 do not disclose, at least, a module
B2	USP5,202,943	cap comprising a first elastic part to protect a laser
B3	USP5,243,678	diode module and a second elastic part to protect a
B4	USP5,280,191	photo diode module, such that the first elastic part
B5	USP5,289,345	and the second elastic part protect the laser diode
B6	USP5,325,454	module and the photo diode module from foreign
B7	USP5,325,455	matter when the module cap is removably attached
B8	USP5,337,398	to an optical module.
B9	USP5,432,630	
B10	USP5,452,388	
B11	USP5,475,783	This reference does not qualify as prior art. Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.
B12	USP5,515,468	B12 and B13 do not disclose, at least, a module cap
B13	USP5,526,160	comprising a first elastic part to protect a laser diode module and a second elastic part to protect a photo diode module, such that the first elastic part and the second elastic part protect the laser diode module and the photo diode module from foreign matter when the module cap is removably attached to an optical module.
B14	USP5,535,034	This reference does not qualify as prior art.

		Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.
B15	USP5,550,941	B15 does not disclose, at least, a module cap comprising a first elastic part to protect a laser diode module and a second elastic part to protect a photo diode module, such that the first elastic part and the second elastic part protect the laser diode module and the photo diode module from foreign matter when the module cap is removably attached to an optical module.
B16	USP5,561,727	This reference does not qualify as prior art. Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
C1	USP5,604,831	C1 and C2 do not disclose, at least, a module cap
C2		comprising a first elastic part to protect a laser
		diode module and a second elastic part to protect a
		photo diode module, such that the first elastic part
	USP4,727,248	and the second elastic part protect the laser diode
		module and the photo diode module from foreign
į		matter when the module cap is removably attached
		to an optical module.
C3		This reference does not qualify as prior art.
	USP5,528,408	Applicants have claimed priority to Japanese
İ	031 3,320,400	Application No. 06-086691, filed on April 25,
		1994, in Japan.
C4	USP5,276,756	C4 through C8 do not disclose, at least, a module
C5	USP5,376,182	cap comprising a first elastic part to protect a laser
C6	USP5,422,972	diode module and a second elastic part to protect a
C7	USP5,644,668	photo diode module, such that the first elastic part
C8		and the second elastic part protect the laser diode
	USP5,993,074	module and the photo diode module from foreign
	031 3,373,074	matter when the module cap is removably attached
		to an optical module.
C9	USP5,561,727	C9-C11 do not qualify as prior art. Applicants have
C10	JP7-225327	claimed priority to Japanese Application No. 06-
C11	JP7-225328	086691, filed on April 25, 1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
D1	Hewlett-Packard, Optoelectronics Designer's Catalog, 1990.	D1 through D8 do not disclose, at least, a module cap comprising a first elastic part to protect a laser
D2	Sumitomo Electric Fiber Optics Corp., Product Bulletin, FDDI Optical Transceiver, ES-9217-XC, publication date unknown.	diode module and a second elastic part to protect a photo diode module, such that the first elastic part and the second elastic part protect the laser diode
D3	Sumitomo Electric, Technical Specification for FDDI Optical Transceiver Module, ES- 9217-XC, SC Duplex FDDI PMD, ES- 9210-XC, SC Duplex LCF PMD, March 25, 1993.	module and the photo diode module from foreign matter when the module cap is removably attached to an optical module.
D4	Proposal for Multi-Chip Integration submitted to the Advanced Research Projects Agency dated May 11, 1993, publication date unknown.	
D5	Thomas & Betts, INFO-LAN Fiber Optic Map Network (IEEE 802.4) Users Manual, August 1988.	
D6	IBM Opto-Electronics Enterprise, RCL-2000 LCF-PMD FDDI, Preliminary Specifications, Jan. 7, 1993.	
D7	Hewlett-Packard, FDDI 1300nm Transceiver, Technical Data, HFBR-5125, 1991.	
D8	Daniel J. Wasser, Optical Datalinks, AT&T Technical Journal, p.46-52, January/February, 1992	

Claim Chart for Claims 163-165 of 10/766,488

Ref	Title	Distinction between reference(s) and claim(s)
A1	USP4,432,604	A1 does not disclose, at least, an optical module
		comprising a laser diode driver to covert serial data,
		which a serial connector transfers, into a laser diode
		electrical signal and to drive a laser diode according
		to the laser diode electrical signal, producing a laser
		diode optical signal such that the laser diode
		transmits the laser diode optical signal.
A2	USP4,553,813	A2 through A4 do not disclose, at least, an optical
A3	USP4,612,670	module comprising a serial connector to transfer
A4	USP4,625,333	serial data.
A5	USP4,737,008	A5 does not disclose, at least, an optical module
		comprising a laser diode driver to covert serial data,
		which a serial connector transfers, into a laser diode
		electrical signal and to drive a laser diode according
		to the laser diode electrical signal, producing a laser
		diode optical signal such that the laser diode
		transmits the laser diode optical signal.
A6	USP4,911,519	A6 does not disclose, at least, an optical module
		comprising a single circuit board, on which a serial
		connector and a laser diode electrical signal
Ì		converter are mounted and to which a laser diode
		and a photo diode module are electrically
		connected proximate to a first edge of the circuit
		board.
A7	USP4,912,521	A7 and A8 do not disclose, at least, an optical
A8	USP4,913,511	module comprising a serial connector to transfer
		serial data.
A9	USP4,945,229	A9 does not disclose, at least, an optical module
		comprising a laser diode driver to covert serial data,
		which a serial connector transfers, into a laser diode
		electrical signal and to drive a laser diode according
		to the laser diode electrical signal, producing a laser
		diode optical signal such that the laser diode
A 10	LISD4 060 024	transmits the laser diode optical signal.
A10	USP4,969,924	A10 and A11 do not disclose, at least, an optical module comprising a single circuit board, on which
A11	USP4,979,787	a serial connector and a laser diode electrical signal
		converter are mounted and to which a laser diode
		and a photo diode module are electrically
		connected proximate to a first edge of the circuit
		board.
A 12	LISDS 012 247	A12 through A16 do not disclose, at least, an
A12	USP5,013,247	optical module comprising a serial connector to
A13	USP5,039,194	optical module comprising a serial connector to

A14	USP5,047,835	transfer serial data.
A15	USP5,099,307	
A16	USP5,113,466	

Ref	Title	Distinction between reference(s) and claim(s)
B1	USP5,127,071	B1 and B2 do not disclose, at least, an optical
B2	USP5,202,943	module comprising a serial connector to transfer serial data.
B3	USP5,243,678	B3 and B4 do not disclose, at least, an optical
B4	0510,213,070	module comprising a laser diode driver to covert
	USP5,280,191	serial data, which a serial connector transfers, into a laser diode electrical signal and to drive a laser diode according to the laser diode electrical signal, producing a laser diode optical signal such that the laser diode transmits the laser diode optical signal.
B5	USP5,289,345	B5 does not disclose, at least, an optical module comprising a single circuit board, on which a serial connector and a laser diode electrical signal converter are mounted and to which a laser diode and a photo diode module are electrically connected proximate to a first edge of the circuit board.
B6	USP5,325,454	B6 through B10 do not disclose, at least, an optical
B7	USP5,325,455	module comprising a serial connector to transfer
B8	USP5,337,398	serial data.
B9	USP5,432,630	
B10	USP5,452,388	
B11	USP5,475,783	This reference does not qualify as prior art. Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.
B12	USP5,515,468	B12 and B13 do not disclose, at least, an optical
B13	USP5,526,160	module comprising a serial connector to transfer serial data.
B14	USP5,535,034	This reference does not qualify as prior art. Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.
B15	USP5,550,941	B15 does not disclosed, at least, an optical module comprising a laser diode.
B16	USP5,561,727	This reference does not qualify as prior art. Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan

Ref	Title	Distinction between reference(s) and claim(s)
C1	USP5,604,831	C1 and C2 do not disclose, at least, an optical
C2	USP4,727,248	module comprising a laser diode driver to covert serial data, which a serial connector transfers, into a laser diode electrical signal and to drive a laser diode according to the laser diode electrical signal, producing a laser diode optical signal such that the laser diode transmits the laser diode optical signal.
C3	USP5,528,408	This reference does not qualify as prior art. Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.
C4	USP5,276,756	C4 through C8 do not disclose, at least, an optical
C5	USP5,376,182	module comprising a serial connector to transfer
C6	USP5,422,972	serial data.
C7	USP5,644,668	·
C8	USP5,993,074	
C9	USP5,561,727	C9-C11 not qualify as prior art. Applicants have
C10	JP7-225327	claimed priority to Japanese Application No. 06-
C11	JP7-225328	086691, filed on April 25, 1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
D1	Hewlett-Packard, Optoelectronics Designer's Catalog, 1990.	D1 through D3 do not disclose, at least, an optical module comprising a laser diode driver to covert
D2	Sumitomo Electric Fiber Optics Corp., Product Bulletin, FDDI Optical Transceiver, ES-9217-XC, publication date unknown.	serial data, which a serial connector transfers, into a laser diode electrical signal and to drive a laser diode according to the laser diode electrical signal,
D3	Sumitomo Electric, Technical Specification for FDDI Optical Transceiver Module, ES- 9217-XC, SC Duplex FDDI PMD, ES- 9210-XC, SC Duplex LCF PMD, March 25, 1993.	producing a laser diode optical signal such that the laser diode transmits the laser diode optical signal.
D4	Proposal for Multi-Chip Integration submitted to the Advanced Research Projects Agency dated May 11, 1993, publication date unknown.	D4 does not disclose, at least, an optical module comprising a laser diode and a photo diode module electrically connected to a circuit board proximate to a first edge of the circuit board that is opposite a second edge of the circuit board, which a serial connector is positioned proximate to and in parallel with.
D5	Thomas & Betts, INFO-LAN Fiber Optic Map Network (IEEE 802.4) Users Manual, August 1988.	D5 through D7 do not disclose, at least, an optical module comprising a laser diode driver to covert serial data, which a serial connector transfers, into a
D6	IBM Opto-Electronics Enterprise, RCL-2000 LCF-PMD FDDI, Preliminary Specifications, Jan. 7, 1993.	laser diode electrical signal and to drive a laser diode according to the laser diode electrical signal,
D7	Hewlett-Packard, FDDI 1300nm Transceiver, Technical Data, HFBR-5125, 1991.	producing a laser diode optical signal such that the laser diode transmits the laser diode optical signal.
D8	Daniel J. Wasser, Optical Datalinks, AT&T Technical Journal, p.46-52, January/February, 1992	D8 does not disclose, at least, a serial connector being positioned proximate to and in parallel with a second edge of a circuit board that is opposite a first edge of the circuit board, which a laser diode module and a photo diode module are electrically connected to the circuit board proximate to.

Claim Chart for Claims 166-168 of 10/766,488

Ref	Title	Distinction between reference(s) and claim(s)
A1	USP4,432,604	A1 does not disclose, at least, an optical module
		comprising a laser diode module comprising a laser
		diode to produce and transmit a laser diode optical
		signal based on a laser diode electrical signal.
A2	USP4,553,813	A2 through A4 do not disclose, at least, an optical
A3	USP4,612,670	module comprising a laser diode electrical signal
A4	USP4,625,333	converter to convert serial data, received from a
_		serial connector, into a laser diode electrical signal.
A5	USP4,737,008	A5 does not disclose, at least, an optical module
		comprising a laser diode module comprising a laser
		diode to produce and transmit a laser diode optical
<u></u>		signal based on a laser diode electrical signal.
A6	USP4,911,519	A6 does not disclose, at least, an optical module
		comprising a single circuit board, on which a serial
		connector and a laser diode electrical signal
		converter are mounted and to which a laser diode
		and a photo diode module are electrically
		connected proximate to a first edge of the circuit
		board.
A7	USP4,912,521	A7 and A8 do not disclose, at least, an optical
A8	USP4,913,511	module comprising a laser diode electrical signal
		converter to convert serial data, received from a
	****	serial connector, into a laser diode electrical signal.
A9	USP4,945,229	A9 does not disclose, at least, an optical module
		comprising a laser diode module comprising a laser
		diode to produce and transmit a laser diode optical
110	11004 060 004	signal based on a laser diode electrical signal.
A10	USP4,969,924	A10 and A11 do not disclose, at least, an optical module comprising a single circuit board, on which
A11	USP4,979,787	a serial connector and a laser diode electrical signal
		converter are mounted and to which a laser diode
		and a photo diode module are electrically
		connected proximate to a first edge of the circuit
		board.
A12	USP5,013,247	A12 through A16 do not disclose, at least, an
A12	USP5,039,194	optical module comprising a laser diode electrical
A14	USP5,047,835	signal converter to convert serial data, received
A14	USP5,099,307	from a serial connector, into a laser diode electrical
A15	USP5,113,466	signal.
AIU	USF 3, 113, 400	

Ref	Title	Distinction between reference(s) and claim(s)
B1	USP5,127,071	B1 and B2 do not disclose, at least, an optical
B2		module comprising a laser diode electrical signal
	USP5,202,943	converter to convert serial data, received from a
		serial connector, into a laser diode electrical signal.
В3	USP5,243,678	B3 and B4 do not disclose, at least, an optical
B4		module comprising a laser diode module
ì	USP5,280,191	comprising a laser diode to produce and transmit a
	USF3,280,191	laser diode optical signal based on a laser diode
		electrical signal.
B5		B5 does not disclose, at least, an optical module
		comprising a single circuit board, on which a serial
		connector and a laser diode electrical signal
	USP5,289,345	converter are mounted and to which a laser diode
		and a photo diode module are electrically
		connected proximate to a first edge of the circuit
	77077 205 454	board.
B6	USP5,325,454	B6 through B10 do not disclose, at least, an optical
B7	USP5,325,455	module comprising a laser diode electrical signal
B8	USP5,337,398	converter to convert serial data, received from a serial connector, into a laser diode electrical signal.
B9	USP5,432,630	serial connector, into a laser diode electrical signal.
B10	USP5,452,388	TILL C
B11		This reference does not qualify as prior art.
	USP5,475,783	Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25,
		1994, in Japan.
D12	LICDS 515 469	B12 and B13 do not disclose, at least, an optical
B12	USP5,515,468	module comprising a laser diode electrical signal
B13	USP5,526,160	converter to convert serial data, received from a
	031 3,320,100	serial connector, into a laser diode electrical signal.
B14		This reference does not qualify as prior art.
		Applicants have claimed priority to Japanese
	USP5,535,034	Application No. 06-086691, filed on April 25,
		1994, in Japan.
B15		B15 does not disclose, at least, an optical module
	11005 550 041	comprising a laser diode module comprising a laser
	USP5,550,941	diode to produce and transmit a laser diode optical
		signal based on a laser diode electrical signal.
B16		This reference does not qualify as prior art.
	11905 561 727	Applicants have claimed priority to Japanese
	USP5,561,727	Application No. 06-086691, filed on April 25,
		1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)	ı

C1	USP5,604,831	C1 and C2 do not disclose, at least, an optical
C2		module comprising a laser diode module
	USP4,727,248	comprising a laser diode to produce and transmit a
	051 1,727,210	laser diode optical signal based on a laser diode
		electrical signal.
C3		This reference does not qualify as prior art.
	USP5,528,408	Applicants have claimed priority to Japanese
	USP3,328,408	Application No. 06-086691, filed on April 25,
		1994, in Japan.
C4	USP5,276,756	C4 through C8 do not disclose, at least, an optical
C5	USP5,376,182	module comprising a laser diode electrical signal
C6	USP5,422,972	converter to convert serial data, received from a
C7	USP5,644,668	serial connector, into a laser diode electrical signal.
C8	USP5,993,074	
<u>C9</u>	USP5,561,727	C9-C11 not qualify as prior art. Applicants have
C10	JP7-225327	claimed priority to Japanese Application No. 06-
C11	JP7-225328	086691, filed on April 25, 1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
D1	Hewlett-Packard, Optoelectronics Designer's Catalog, 1990.	D1 through D3 do not disclose, at least, an optical module comprising a laser diode module
D2	Sumitomo Electric Fiber Optics Corp., Product Bulletin, FDDI Optical Transceiver, ES-9217-XC, publication date unknown.	comprising a laser diode to produce and transmit a laser diode optical signal based on a laser diode electrical signal.
D3	Sumitomo Electric, Technical Specification for FDDI Optical Transceiver Module, ES- 9217-XC, SC Duplex FDDI PMD, ES- 9210-XC, SC Duplex LCF PMD, March 25, 1993.	¥
D4	Proposal for Multi-Chip Integration submitted to the Advanced Research Projects Agency dated May 11, 1993, publication date unknown.	D4 does not disclose, at least, an optical module comprising a laser diode module and a photo diode module are electrically connected to a circuit board proximate to a first edge of the circuit board that is opposite a second edge of the circuit board, which a serial connector is positioned proximate to and in parallel with.
D5 _.	Thomas & Betts, INFO-LAN Fiber Optic Map Network (IEEE 802.4) Users Manual, August 1988.	D5 through D7 do not disclose, at least, an optical module comprising a laser diode module comprising a laser diode to produce and transmit a
D6	IBM Opto-Electronics Enterprise, RCL-2000 LCF-PMD FDDI, Preliminary Specifications, Jan. 7, 1993.	laser diode optical signal based on a laser diode electrical signal.
D7	Hewlett-Packard, FDDI 1300nm Transceiver, Technical Data, HFBR-5125, 1991.	
D8	Daniel J. Wasser, Optical Datalinks, AT&T Technical Journal, p.46-52, January/February, 1992	D8 does not disclose, at least, a serial connector being positioned proximate to and in parallel with a

second edge of a circuit board that is opposite a first edge of the circuit board, which a laser diode module and a photo diode module are electrically
connected to the circuit board proximate to.

Claim Chart for Claim 170 of 10/766,488

Ref	Title	Distinction between reference(s) and claim(s)
A1	USP4,432,604	A1 does not disclose, at least, an optical module
		comprising a laser diode module to convert a laser
		diode electrical signal into a laser diode optical
		signal and transmit the laser diode optical signal,
		which is transmitted at a data transmission rate of
		1000 Mbits/s or more.
A2	USP4,553,813	A2 through A4 do not disclose, at least, an optical
A3	USP4,612,670	module comprising a laser diode electrical signal
A4	USP4,625,333	converter to convert serial data, received from a
	11CD 4 727 000	serial connector, into a laser diode electrical signal.
A5	USP4,737,008	A5 does not disclose, at least, an optical module
		comprising a laser diode module to convert a laser
		diode electrical signal into a laser diode optical signal and transmit the laser diode optical signal,
		which is transmitted at a data transmission rate of
		1000 Mbits/s or more.
A6	USP4,911,519	A6 does not disclose, at least, an optical module
Au	031 4,911,319	comprising a single circuit board on which a serial
		connector, a laser diode electrical signal converter
		and an integrated circuit are mounted and to which
		a laser diode module and a phone diode are
		electrically connected.
A7	USP4,912,521	A7 and A8 do not disclose, at least, an optical
A8	USP4,913,511	module comprising a laser diode electrical signal
		converter to convert serial data, received from a
		serial connector, into a laser diode electrical signal.
A9	USP4,945,229	A9 does not disclose, at least, an optical module
		comprising a laser diode module to convert a laser
		diode electrical signal into a laser diode optical
		signal and transmit the laser diode optical signal,
		which is transmitted at a data transmission rate of
		1000 Mbits/s or more.
A10	USP4,969,924	A10 and A11 do not disclose, at least, an optical
A11	USP4,979,787	module comprising a single circuit board on which
		a serial connector, a laser diode electrical signal
		converter and an integrated circuit are mounted and
		to which a laser diode module and a phone diode
A 12	LICDS 012 247	are electrically connected.
A12	USP5,013,247	A12 through A16 do not disclose, at least, an optical module comprising a laser diode electrical
A13	USP5,039,194	signal converter to convert serial data, received
A14	USP5,047,835	from a serial connector, into a laser diode electrical
A15	USP5,099,307	signal.
A16	USP5,113,466	oignai.

Ref	Title	Distinction between reference(s) and claim(s)
B1	USP5,127,071	B1 and B2 do not disclose, at least, an optical
B2		module comprising a laser diode electrical signal
	USP5,202,943	converter to convert serial data, received from a
		serial connector, into a laser diode electrical signal.
B3	USP5,243,678	B3 and B4 do not disclose, at least, an optical
B4		module comprising a laser diode module to convert
		a laser diode electrical signal into a laser diode
	USP5,280,191	optical signal and transmit the laser diode optical
		signal, which is transmitted at a data transmission
		rate of 1000 Mbits/s or more.
B5		B5 does not disclose, at least, an optical module
		comprising a single circuit board on which a serial
	USP5,289,345	connector, a laser diode electrical signal converter
	001 3,203,343	and an integrated circuit are mounted and to which
		a laser diode module and a phone diode are
		electrically connected.
B6	USP5,325,454	B6 through B10 do not disclose, at least, an optical
B7	USP5,325,455	module comprising a laser diode electrical signal
B8	USP5,337,398	converter to convert serial data, received from a
B9_	USP5,432,630	serial connector, into a laser diode electrical signal.
B10	USP5,452,388	
B11		This reference does not qualify as prior art.
	USP5,475,783	Applicants have claimed priority to Japanese
:		Application No. 06-086691, filed on April 25,
72.10	71075 515 460	1994, in Japan.
B12	USP5,515,468	B12 and B13 do not disclose, at least, an optical
B13	HIGDS 506 160	module comprising a laser diode electrical signal
	USP5,526,160	converter to convert serial data, received from a
D14		serial connector, into a laser diode electrical signal.
B14		This reference does not qualify as prior art. Applicants have claimed priority to Japanese
	USP5,535,034	Application No. 06-086691, filed on April 25,
		1994, in Japan.
B15		B15 does not disclose, at least, an optical module
		comprising a laser diode module to convert a laser
		diode electrical signal into a laser diode optical
	USP5,550,941	signal and transmit the laser diode optical signal,
		which is transmitted at a data transmission rate of
		1000 Mbits/s or more.
B16		This reference does not qualify as prior art.
	HODE 561 505	Applicants have claimed priority to Japanese
	USP5,561,727	Application No. 06-086691, filed on April 25,
		1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
C1	USP5,604,831	C1 and C2 do not disclose, at least, an optical
C2		module comprising a laser diode module to convert
,		a laser diode electrical signal into a laser diode
	USP4,727,248	optical signal and transmit the laser diode optical
		signal, which is transmitted at a data transmission
	,	rate of 1000 Mbits/s or more.
C3		This reference does not qualify as prior art.
	USP5,528,408	Applicants have claimed priority to Japanese
	USF 3,326,406	Application No. 06-086691, filed on April 25,
		1994, in Japan.
C4	USP5,276,756	C4 through C8 do not disclose, at least, an optical
C5	USP5,376,182	module comprising a laser diode electrical signal
C6	USP5,422,972	converter to convert serial data, received from a
C7	USP5,644,668	serial connector, into a laser diode electrical signal.
C8	USP5,993,074	
C9	USP5,561,727	C9-C11 do not qualify as prior art. Applicants have
C10	JP7-225327	claimed priority to Japanese Application No. 06-
C11	JP7-225328	086691, filed on April 25, 1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
D1	Hewlett-Packard, Optoelectronics Designer's Catalog, 1990.	D1 through D3 do not disclose, at least, an optical module comprising a laser diode module to convert
D2	Sumitomo Electric Fiber Optics Corp., Product Bulletin, FDDI Optical Transceiver, ES-9217-XC, publication date unknown.	a laser diode electrical signal into a laser diode optical signal and transmit the laser diode optical signal, which is transmitted at a data transmission
D3	Sumitomo Electric, Technical Specification for FDDI Optical Transceiver Module, ES- 9217-XC, SC Duplex FDDI PMD, ES- 9210-XC, SC Duplex LCF PMD, March 25, 1993.	rate of 1000 Mbits/s or more.
D4	Proposal for Multi-Chip Integration submitted to the Advanced Research Projects Agency dated May 11, 1993, publication date unknown.	D4 does not disclose, at least, an optical module comprising a laser diode module and a photo diode electrically connected to a circuit board proximate to a first edge of the circuit board that is opposite a second edge of the circuit board, which a serial connector is positioned proximate to.
D5	Thomas & Betts, INFO-LAN Fiber Optic Map Network (IEEE 802.4) Users Manual, August 1988.	D5 through D7 do not disclose, at least, an optical module comprising a laser diode module to convert a laser diode electrical signal into a laser diode
D6	IBM Opto-Electronics Enterprise, RCL-2000 LCF-PMD FDDI, Preliminary Specifications, Jan. 7, 1993.	optical signal and transmit the laser diode optical signal, which is transmitted at a data transmission
D7	Hewlett-Packard, FDDI 1300nm Transceiver, Technical Data, HFBR-5125,	rate of 1000 Mbits/s or more.

	1991.	
D8	Daniel J. Wasser, Optical Datalinks, AT&T Technical Journal, p.46-52, January/February, 1992	D8 does not disclose, at least, a serial connector being positioned proximate to and in parallel with a second edge of a circuit board that is opposite a first edge of the circuit board, which a laser diode module and a photo diode module are electrically connected to the circuit board proximate to.

Claim Chart for Claim 171 of 10/766,488

Ref	Title	Distinction between reference(s) and claim(s)
Al	USP4,432,604	A1 does not disclose, at least, an optical module
		comprising a laser diode module to convert a laser
		diode electrical signal into a laser diode optical
		signal and transmit the laser diode optical signal,
		which is transmitted at a data transmission rate of
		1000 Mbits/s or more.
A2	USP4,553,813	A2 through A4 do not disclose, at least, an optical
A3	USP4,612,670	module comprising a laser diode electrical signal
A4	USP4,625,333	converter to convert serial data, received from a
		serial connector, into a laser diode electrical signal.
A5	USP4,737,008	A5 does not disclose, at least, an optical module
	•	comprising a laser diode module to convert a laser
		diode electrical signal into a laser diode optical
		signal and transmit the laser diode optical signal,
		which is transmitted at a data transmission rate of
		1000 Mbits/s or more.
A6	USP4,911,519	A6 does not disclose, at least, an optical module
		comprising a single circuit board on which a serial
		connector, a laser diode electrical signal converter
		and an integrated circuit are mounted and to which
		a laser diode module and a phone diode are
		electrically connected.
A7	USP4,912,521	A7 and A8 do not disclose, at least, an optical
A8	USP4,913,511	module comprising a laser diode electrical signal
		converter to convert serial data, received from a
		serial connector, into a laser diode electrical signal.
A9	USP4,945,229	A9 does not disclose, at least, an optical module
		comprising a laser diode module to convert a laser
		diode electrical signal into a laser diode optical
		signal and transmit the laser diode optical signal,
		which is transmitted at a data transmission rate of
		1000 Mbits/s or more.
A10	USP4,969,924	A10 and A11 do not disclose, at least, an optical
A11	USP4,979,787	module comprising a single circuit board on which
		a serial connector, a laser diode electrical signal
		converter and an integrated circuit are mounted and
		to which a laser diode module and a phone diode
		are electrically connected.
A12	USP5,013,247	A12 through A16 do not disclose, at least, an
A13	USP5,039,194	optical module comprising a laser diode electrical
A14	USP5,047,835	signal converter to convert serial data, received
A15	USP5,099,307	from a serial connector, into a laser diode electrical
A16	USP5,113,466	signal.

Ref	Title	Distinction between reference(s) and claim(s)
B1	USP5,127,071	B1 and B2 do not disclose, at least, an optical
B2		module comprising a laser diode electrical signal
	USP5,202,943	converter to convert serial data, received from a
	1	serial connector, into a laser diode electrical signal.
B3	USP5,243,678	B3 and B4 do not disclose, at least, an optical
B4		module comprising a laser diode module to convert
		a laser diode electrical signal into a laser diode
	USP5,280,191	optical signal and transmit the laser diode optical
		signal, which is transmitted at a data transmission
		rate of 1000 Mbits/s or more.
B5		B5 does not disclose, at least, an optical module
		comprising a single circuit board on which a serial
	USP5,289,345	connector, a laser diode electrical signal converter
	0353,269,343	and an integrated circuit are mounted and to which
		a laser diode module and a phone diode are
		electrically connected.
B6	USP5,325,454	B7 through B9 do not disclose, at least, an optical
B7	USP5,325,455	module comprising a laser diode electrical signal
B8	USP5,337,398	converter to convert serial data, received from a
B9	USP5,432,630	serial connector, into a laser diode electrical signal.
B10	USP5,452,388	
B11		This reference does not qualify as prior art.
	USP5,475,783	Applicants have claimed priority to Japanese
	0013,173,703	Application No. 06-086691, filed on April 25,
		1994, in Japan.
B12	USP5,515,468	B12 and B13 do not disclose, at least, an optical
B13		module comprising a laser diode electrical signal
	USP5,526,160	converter to convert serial data, received from a
		serial connector, into a laser diode electrical signal.
B14		This reference does not qualify as prior art.
	USP5,535,034	Applicants have claimed priority to Japanese
		Application No. 06-086691, filed on April 25,
D15		1994, in Japan.
B15		B15 does not disclose, at least, an optical module
1		comprising a laser diode module to convert a laser diode electrical signal into a laser diode optical
	USP5,550,941	signal and transmit the laser diode optical signal,
		which is transmitted at a data transmission rate of
		1000 Mbits/s or more.
B16		This reference does not qualify as prior art.
D10		Applicants have claimed priority to Japanese
	USP5,561,727	Application No. 06-086691, filed on April 25,
		1994, in Japan.
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Ref	Title	Distinction between reference(s) and claim(s)
C1	USP5,604,831	C1 and C2 do not disclose, at least, an optical
C2		module comprising a laser diode module to convert
		a laser diode electrical signal into a laser diode
	USP4,727,248	optical signal and transmit the laser diode optical
		signal, which is transmitted at a data transmission
		rate of 1000 Mbits/s or more.
C3		This reference does not qualify as prior art.
	USP5,528,408	Applicants have claimed priority to Japanese
	051 3,326, 106	Application No. 06-086691, filed on April 25,
		1994, in Japan.
C4	USP5,276,756	C4 through C8 do not disclose, at least, an optical
C5	USP5,376,182	module comprising a laser diode electrical signal
C6	USP5,422,972	converter to convert serial data, received from a
C7	USP5,644,668	serial connector, into a laser diode electrical signal.
C8	USP5,993,074	
C9	USP5,561,727	C9-C11 do not qualify as prior art. Applicants have
C10	JP7-225327	claimed priority to Japanese Application No. 06-
C11	JP7-225328	086691, filed on April 25, 1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
D1	Hewlett-Packard, Optoelectronics Designer's Catalog, 1990.	D1 through D3 do not disclose, at least, an optical module comprising a laser diode module to convert
D2	Sumitomo Electric Fiber Optics Corp., Product Bulletin, FDDI Optical Transceiver, ES-9217-XC, publication date unknown.	a laser diode electrical signal into a laser diode optical signal and transmit the laser diode optical signal, which is transmitted at a data transmission
D3	Sumitomo Electric, Technical Specification for FDDI Optical Transceiver Module, ES- 9217-XC, SC Duplex FDDI PMD, ES- 9210-XC, SC Duplex LCF PMD, March 25, 1993.	rate of 1000 Mbits/s or more.
D4	Proposal for Multi-Chip Integration submitted to the Advanced Research Projects Agency dated May 11, 1993, publication date unknown.	D4 does not disclose, at least, an optical module comprising a laser diode module and a photo diode electrically connected to a circuit board proximate to a first edge of the circuit board that is opposite a second edge of the circuit board, which a serial connector is positioned proximate to.
D5	Thomas & Betts, INFO-LAN Fiber Optic Map Network (IEEE 802.4) Users Manual, August 1988.	D5 through D7 do not disclose, at least, an optical module comprising a laser diode module to convert a laser diode electrical signal into a laser diode
D6	IBM Opto-Electronics Enterprise, RCL-2000 LCF-PMD FDDI, Preliminary Specifications, Jan. 7, 1993.	optical signal and transmit the laser diode optical signal, which is transmitted at a data transmission
D7	Hewlett-Packard, FDDI 1300nm Transceiver, Technical Data, HFBR-5125,	rate of 1000 Mbits/s or more.

	1991.	
D8	Daniel J. Wasser, Optical Datalinks, AT&T Technical Journal, p.46-52, January/February, 1992	D8 does not disclose, at least, a serial connector being positioned proximate to and in parallel with a second edge of a circuit board that is opposite a first edge of the circuit board, which a laser diode module and a photo diode module are electrically connected to the circuit board proximate to.

Claim Chart for Claims 172-175 of 10/766,488

Ref	Title	Distinction between reference(s) and claim(s)
A1	USP4,432,604	A1 does not disclose, at least, an optical module
		comprising a laser diode module to convert a laser
		diode electrical signal into a laser diode optical
		signal and transmit the laser diode optical signal.
A2	USP4,553,813	A2 through A4 do not disclose, at least, an optical
A3	USP4,612,670	module comprising a laser diode electrical signal
A4	USP4,625,333	converter to convert serial data, received from a
		serial connector, a diode electrical signal.
A5	USP4,737,008	A5 does not disclose, at least, an optical module
		comprising a laser diode module to convert a laser
		diode electrical signal into a laser diode optical
		signal and transmit the laser diode optical signal.
A6	USP4,911,519	A6 does not disclose, at least, an optical module
,		comprising a single circuit board on which a serial
		connector and a laser diode electrical signal
		converter are mounted, and to which a laser diode
		module and photo diode module are electrically
		connected proximate to a first edge of the circuit
		board.
A7	USP4,912,521	A7 and A8 do not disclose, at least, an optical
A8	USP4,913,511	module comprising a laser diode electrical signal
		converter to convert serial data, received from a
		serial connector, a diode electrical signal.
A9	USP4,945,229	A9 does not disclose, at least, an optical module
		comprising a laser diode module to convert a laser
		diode electrical signal into a laser diode optical
-		signal and transmit the laser diode optical signal.
A10	USP4,969,924	A10 and A11 do not disclose, at least, an optical
A11	USP4,979,787	module comprising a single circuit board on which
		a serial connector and a laser diode electrical signal
		converter are mounted, and to which a laser diode
		module and photo diode module are electrically
		connected proximate to a first edge of the circuit
		board.
A12	USP5,013,247	A12 through A16 do not disclose, at least, an
A13	USP5,039,194	optical module comprising a laser diode electrical
A14	USP5,047,835	signal converter to convert serial data, received
A15	USP5,099,307	from a serial connector, a diode electrical signal.
A16	USP5,113,466	

Ref	Title	Distinction between reference(s) and claim(s)
B1	USP5,127,071	B1 and B2 do not disclose, at least, an optical

B2	USP5,202,943	module comprising a laser diode electrical signal converter to convert serial data, received from a serial connector, a diode electrical signal.
B3	USP5,243,678	B3 and B4 do not disclose, at least, an optical
B4		module comprising a laser diode module to convert
	USP5,280,191	a laser diode electrical signal into a laser diode
	0013,200,131	optical signal and transmit the laser diode optical
		signal.
B5		B5 does not disclose, at least, an optical module
		comprising a single circuit board on which a serial
	11005 200 245	connector and a laser diode electrical signal
ŀ	USP5,289,345	converter are mounted, and to which a laser diode
		module and photo diode module are electrically connected proximate to a first edge of the circuit
		board.
B6	USP5,325,454	B6 through B10 do not disclose, at least, an optical
B7	USP5,325,455	module comprising a laser diode electrical signal
B8	USP5,337,398	converter to convert serial data, received from a
B9	USP5,432,630	serial connector, a diode electrical signal.
B10	USP5,452,388	
B11	001 3,432,300	This reference does not qualify as prior art.
D 11		Applicants have claimed priority to Japanese
	USP5,475,783	Application No. 06-086691, filed on April 25,
		1994, in Japan.
B12	USP5,515,468	B12 and B13 do not disclose, at least, an optical
B13		module comprising a laser diode electrical signal
	USP5,526,160	converter to convert serial data, received from a
		serial connector, a diode electrical signal.
B14		This reference does not qualify as prior art.
	USP5,535,034	Applicants have claimed priority to Japanese
ļ	031 3,333,034	Application No. 06-086691, filed on April 25,
		1994, in Japan.
B15		B15 does not disclose, at least, an optical module
	USP5,550,941	comprising a laser diode module to convert a laser
		diode electrical signal into a laser diode optical
Dis		signal and transmit the laser diode optical signal.
B16		This reference does not qualify as prior art.
	USP5,561,727	Applicants have claimed priority to Japanese
		Application No. 06-086691, filed on April 25,
L		1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
C1	USP5,604,831	C1 and C2 do not disclose, at least, an optical
C2	USP4,727,248	module comprising a laser diode module to convert a laser diode electrical signal into a laser diode

		optical signal and transmit the laser diode optical
		signal.
C3		This reference does not qualify as prior art.
	USP5,528,408	Applicants have claimed priority to Japanese
	USF3,326,406	Application No. 06-086691, filed on April 25,
		1994, in Japan.
C4	USP5,276,756	C4 through C8 do not disclose, at least, an optical
C5	USP5,376,182	module comprising a laser diode electrical signal
C6	USP5,422,972	converter to convert serial data, received from a
C7	USP5,644,668	serial connector, a diode electrical signal.
C8	USP5,993,074	
C9	USP5,561,727	C9-C11 do not qualify as prior art. Applicants have
C10	JP7-225327	claimed priority to Japanese Application No. 06-
C11	JP7-225328	086691, filed on April 25, 1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
D1	Hewlett-Packard, Optoelectronics Designer's Catalog, 1990.	D1 through D3 do not disclose, at least, an optical module comprising a laser diode module to convert
D2	Sumitomo Electric Fiber Optics Corp., Product Bulletin, FDDI Optical Transceiver, ES-9217-XC, publication date unknown.	a laser diode electrical signal into a laser diode optical signal and transmit the laser diode optical signal.
D3	Sumitomo Electric, Technical Specification for FDDI Optical Transceiver Module, ES- 9217-XC, SC Duplex FDDI PMD, ES- 9210-XC, SC Duplex LCF PMD, March 25, 1993.	
D4	Proposal for Multi-Chip Integration submitted to the Advanced Research Projects Agency dated May 11, 1993, publication date unknown.	D4 does not disclose, at least, an optical module comprising a laser diode module and a photo diode module electrically connected to a circuit board proximate to a first edge of the circuit board that is opposite a second edge of the circuit board, which a serial connector is positioned proximate to.
D5	Thomas & Betts, INFO-LAN Fiber Optic Map Network (IEEE 802.4) Users Manual, August 1988.	D5 through D7 do not disclose, at least, an optical module comprising a laser diode module to convert a laser diode electrical signal into a laser diode
D6	IBM Opto-Electronics Enterprise, RCL-2000 LCF-PMD FDDI, Preliminary Specifications, Jan. 7, 1993.	optical signal and transmit the laser diode optical signal.
D7	Hewlett-Packard, FDDI 1300nm Transceiver, Technical Data, HFBR-5125, 1991.	
D8	Daniel J. Wasser, Optical Datalinks, AT&T Technical Journal, p.46-52, January/February, 1992	D8 does not disclose, at least, a serial connector being positioned proximate to and in parallel with a second edge of a circuit board that is opposite a first edge of the circuit board, which a laser diode module and a photo diode module are electrically connected to the circuit board proximate to.

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Claim Chart for Claims 176-177 of 10/766,488

Ref	Title	Distinction between reference(s) and claim(s)
Al	USP4,432,604	Al does not disclose, at least, an optical module
		comprising a laser diode module to convert a laser
}		diode electrical signal into a laser diode optical
		signal and transmit the laser diode optical signal.
A2	USP4,553,813	A2 through A4 do not disclose, at least, an optical
A3	USP4,612,670	module comprising a laser diode electrical signal
A4	USP4,625,333	converter to convert serial data, received from a
		serial connector, into a laser diode electrical signal.
A5	USP4,737,008	A5 does not disclose, at least, an optical module
		comprising a laser diode module to convert a laser
		diode electrical signal into a laser diode optical
		signal and transmit the laser diode optical signal.
A6	USP4,911,519	A6 does not disclose, at least, an optical module
		comprising a single circuit board on which a serial
		connector and a laser diode electrical signal
		converter are mounted, and to which a laser diode
		module and photo diode module are electrically
	•	connected proximate to a first edge of the circuit
		board.
A7	USP4,912,521	A7 and A8 do not disclose, at least, an optical
A8	USP4,913,511	module comprising a laser diode electrical signal
		converter to convert serial data, received from a
	***************************************	serial connector, into a laser diode electrical signal.
A9	USP4,945,229	A9 does not disclose, at least, an optical module
		comprising a laser diode module to convert a laser
		diode electrical signal into a laser diode optical
4.10	11004.000.004	signal and transmit the laser diode optical signal. A10 and A11 do not disclose, at least, an optical
A10	USP4,969,924	module comprising a single circuit board on which
A11	USP4,979,787	a serial connector and a laser diode electrical signal
		converter are mounted, and to which a laser diode
		module and photo diode module are electrically
		connected proximate to a first edge of the circuit
		board.
A12	USP5,013,247	A12 through A16 do not disclose, at least, an
A13	USP5,039,194	optical module comprising a laser diode electrical
A14	USP5,047,835	signal converter to convert serial data, received
A15	USP5,099,307	from a serial connector, into a laser diode electrical
A16	USP5,113,466	signal.
AIU	0013,113,700	

Ref	Title	Distinction between reference(s) and claim(s)
B1	USP5,127,071	B1 and B2 do not disclose, at least, an optical

B2		module comprising a laser diode electrical signal
	USP5,202,943	converter to convert serial data, received from a
		serial connector, into a laser diode electrical signal.
B3	USP5,243,678	B3 and B4 do not disclose, at least, an optical
B4		module comprising a laser diode module to convert
	11005 000 101	a laser diode electrical signal into a laser diode
	USP5,280,191	optical signal and transmit the laser diode optical
		signal.
B5		B5 does not disclose, at least, an optical module
		comprising a single circuit board on which a serial
		connector and a laser diode electrical signal
	USP5,289,345	converter are mounted, and to which a laser diode
		module and photo diode module are electrically
		connected proximate to a first edge of the circuit
		board.
B6	USP5,325,454	B6 through B10 do not disclose, at least, an optical
B7	USP5,325,455	module comprising a laser diode electrical signal
B8	USP5,337,398	converter to convert serial data, received from a
B9	USP5,432,630	serial connector, into a laser diode electrical signal.
B10	USP5,452,388	
B11		This reference does not qualify as prior art.
	USP5,475,783	Applicants have claimed priority to Japanese
		Application No. 06-086691, filed on April 25,
		1994, in Japan.
B12	USP5,515,468	B12 and B13 do not disclose, at least, an optical
B13		module comprising a laser diode electrical signal
	USP5,526,160	converter to convert serial data, received from a
		serial connector, into a laser diode electrical signal.
B14		This reference does not qualify as prior art.
	USP5,535,034	Applicants have claimed priority to Japanese
	00,000,000	Application No. 06-086691, filed on April 25,
		1994, in Japan.
B15		B15 does not disclose, at least, an optical module
	USP5,550,941	comprising a laser diode module to convert a laser
		diode electrical signal into a laser diode optical
		signal and transmit the laser diode optical signal.
B16		This reference does not qualify as prior art.
	USP5,561,727	Applicants have claimed priority to Japanese
	USP3,301,727	Application No. 06-086691, filed on April 25,
		1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
C1		C1 and C2 do not disclose, at least, an optical
C2	USP4,727,248	module comprising a laser diode module to convert a laser diode electrical signal into a laser diode

		optical signal and transmit the laser diode optical
		signal.
C3		This reference does not qualify as prior art.
	11000 520 400	Applicants have claimed priority to Japanese
	USP5,528,408	Application No. 06-086691, filed on April 25,
		1994, in Japan.
C4	USP5,276,756	C4 through C8 do not disclose, at least, an optical
C5	USP5,376,182	module comprising a laser diode electrical signal
C6	USP5,422,972	converter to convert serial data, received from a
C7	USP5,644,668	serial connector, into a laser diode electrical signal.
C8	USP5,993,074	
C9	USP5,561,727	C9-C11 do not qualify as prior art. Applicants have
C10	JP7-225327	claimed priority to Japanese Application No. 06-
C11	JP7-225328	086691, filed on April 25, 1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
D1	Hewlett-Packard, Optoelectronics Designer's Catalog, 1990.	D1 through D3 do not disclose, at least, an optical module comprising a laser diode module to convert
D2	Sumitomo Electric Fiber Optics Corp., Product Bulletin, FDDI Optical Transceiver, ES-9217-XC, publication date unknown.	a laser diode electrical signal into a laser diode optical signal and transmit the laser diode optical signal.
D3	Sumitomo Electric, Technical Specification for FDDI Optical Transceiver Module, ES- 9217-XC, SC Duplex FDDI PMD, ES- 9210-XC, SC Duplex LCF PMD, March 25, 1993.	
D4	Proposal for Multi-Chip Integration submitted to the Advanced Research Projects Agency dated May 11, 1993, publication date unknown.	D4 does not disclose, at least, a plurality of pins to mount a optical module to a motherboard are fixed to a frame.
D5	Thomas & Betts, INFO-LAN Fiber Optic Map Network (IEEE 802.4) Users Manual, August 1988.	D5 through D7 do not disclose, at least, an optical module comprising a laser diode module to convert a laser diode electrical signal into a laser diode
D6	IBM Opto-Electronics Enterprise, RCL-2000 LCF-PMD FDDI, Preliminary Specifications, Jan. 7, 1993.	optical signal and transmit the laser diode optical signal.
D7	Hewlett-Packard, FDDI 1300nm Transceiver, Technical Data, HFBR-5125, 1991.	
D8	Daniel J. Wasser, Optical Datalinks, AT&T Technical Journal, p.46-52, January/February, 1992	D8 does not disclose, at least, an optical module comprising a laser diode electrical signal converter to convert serial data, received from a serial connector, into a laser diode electrical signal.

Claim Chart for Claims 178-179 of 10/766,488

Ref	Title	Distinction between reference(s) and claim(s)
A1	USP4,432,604	A1 does not disclose, at least, an optical module
		comprising a laser diode module to convert a laser
		diode electrical signal into a laser diode optical
		signal and transmit the laser diode optical signal.
A2	USP4,553,813	A2 through A4 do not disclose, at least, an optical
A3	USP4,612,670	module comprising a laser diode electrical signal
A4	USP4,625,333	converter to convert serial data, received from a
		serial connector, into a laser diode electrical signal.
A5	USP4,737,008	A5 does not disclose, at least, an optical module
		comprising a laser diode module to convert a laser
		diode electrical signal into a laser diode optical
		signal and transmit the laser diode optical signal.
A6	USP4,911,519	A6 does not disclose, at least, an optical module
		comprising a single circuit board on which a serial
		connector and a laser diode electrical signal
		converter are mounted, and to which a laser diode
		module and a photo diode module are electrically
		connected proximate to a first edge of the circuit
		board.
A7	USP4,912,521	A7 and A8 do not disclose, at least, an optical
A8	USP4,913,511	module comprising a laser diode electrical signal
		converter to convert serial data, received from a
		serial connector, into a laser diode electrical signal.
A9	USP4,945,229	A9 does not disclose, at least, an optical module
		comprising a laser diode module to convert a laser
		diode electrical signal into a laser diode optical
1.10	7707 4 0 60 00 4	signal and transmit the laser diode optical signal.
A10	USP4,969,924	A10 and A11 do not disclose, at least, an optical
A11	USP4,979,787	module comprising a single circuit board on which
		a serial connector and a laser diode electrical signal
		converter are mounted, and to which a laser diode
		module and a photo diode module are electrically
		connected proximate to a first edge of the circuit
A 10	LICDS 012 247	board.
A12	USP5,013,247	A12 through A16 do not disclose, at least, an optical module comprising a laser diode electrical
A13	USP5,039,194	signal converter to convert serial data, received
A14	USP5,047,835	from a serial connector, into a laser diode electrical
A15	USP5,099,307	·
A16	USP5,113,466	signal.

Ref	Title	Distinction between reference(s) and claim(s)
B1	USP5,127,071	B1 and B2 do not disclose, at least, an optical

B2	USP5,202,943	module comprising a laser diode electrical signal converter to convert serial data, received from a
	0313,202,943	serial connector, into a laser diode electrical signal.
B3	USP5,243,678	B3 and B4 do not disclose, at least, an optical
B4		module comprising a laser diode module to convert
	USP5,280,191	a laser diode electrical signal into a laser diode optical signal and transmit the laser diode optical signal.
B5		B5 does not disclose, at least, an optical module
		comprising a single circuit board on which a serial
		connector and a laser diode electrical signal
	USP5,289,345	converter are mounted, and to which a laser diode
	, ,	module and a photo diode module are electrically
		connected proximate to a first edge of the circuit
		board.
B6	USP5,325,454	B6 through B10 do not disclose, at least, an optical
B7	USP5,325,455	module comprising a laser diode electrical signal
B8	USP5,337,398	converter to convert serial data, received from a
B9	USP5,432,630	serial connector, into a laser diode electrical signal.
B10	USP5,452,388	
B11		This reference does not qualify as prior art.
	LICDS 475 792	Applicants have claimed priority to Japanese
	USP5,475,783	Application No. 06-086691, filed on April 25,
		1994, in Japan.
B12	USP5,515,468	B12 and B13 do not disclose, at least, an optical
B13		module comprising a laser diode electrical signal
	USP5,526,160	converter to convert serial data, received from a
		serial connector, into a laser diode electrical signal.
B14		This reference does not qualify as prior art.
	USP5,535,034	Applicants have claimed priority to Japanese
		Application No. 06-086691, filed on April 25,
		1994, in Japan.
B15		B15 does not disclose, at least, an optical module
	USP5,550,941	comprising a laser diode module to convert a laser
		diode electrical signal into a laser diode optical
		signal and transmit the laser diode optical signal.
B16		This reference does not qualify as prior art.
	USP5,561,727	Applicants have claimed priority to Japanese
		Application No. 06-086691, filed on April 25,
		1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
C1	USP5,604,831	C1 and C2 do not disclose, at least, an optical
C2	USP4,727,248	module comprising a laser diode module to convert a laser diode electrical signal into a laser diode

		optical signal and transmit the laser diode optical
		signal.
C3		This reference does not qualify as prior art.
l	USP5,528,408	Applicants have claimed priority to Japanese
	03F3,328,408	Application No. 06-086691, filed on April 25,
		1994, in Japan.
C4	USP5,276,756	C4 through C8 do not disclose, at least, an optical
C5	USP5,376,182	module comprising a laser diode electrical signal
<u>C</u> 6	USP5,422,972	converter to convert serial data, received from a
C7	USP5,644,668	serial connector, into a laser diode electrical signal.
C8	USP5,993,074	
C9	USP5,561,727	C9-C11 do not qualify as prior art. Applicants have
C10	JP7-225327	claimed priority to Japanese Application No. 06-
C11	JP7-225328	086691, filed on April 25, 1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
D1	Hewlett-Packard, Optoelectronics	D1 through D3 do not disclose, at least, an optical
D2	Designer's Catalog, 1990. Sumitomo Electric Fiber Optics Corp., Product Bulletin, FDDI Optical Transceiver, ES-9217-XC, publication date unknown. Sumitomo Electric, Technical Specification	module comprising a laser diode module to convert a laser diode electrical signal into a laser diode optical signal and transmit the laser diode optical signal.
D3	for FDDI Optical Transceiver Module, ES- 9217-XC, SC Duplex FDDI PMD, ES- 9210-XC, SC Duplex LCF PMD, March 25, 1993.	·
D4	Proposal for Multi-Chip Integration submitted to the Advanced Research Projects Agency dated May 11, 1993, publication date unknown.	D4 does not disclose, at least, an optical module comprising a laser diode module and a photo diode module electrically connected to a circuit board proximate to a first edge of the circuit board that is opposite a second edge of the circuit board, which a serial connector is positioned proximate to.
D5	Thomas & Betts, INFO-LAN Fiber Optic Map Network (IEEE 802.4) Users Manual, August 1988.	D5 through D7 do not disclose, at least, an optical module comprising a laser diode module to convert a laser diode electrical signal into a laser diode
D6	IBM Opto-Electronics Enterprise, RCL-2000 LCF-PMD FDDI, Preliminary Specifications, Jan. 7, 1993.	optical signal and transmit the laser diode optical signal.
D7	Hewlett-Packard, FDDI 1300nm Transceiver, Technical Data, HFBR-5125, 1991.	
D8	Daniel J. Wasser, Optical Datalinks, AT&T Technical Journal, p.46-52, January/February, 1992	D8 does not disclose, at least, a serial connector being positioned proximate to and in parallel with a second edge of a circuit board that is opposite a first edge of the circuit board, which a laser diode module and a photo diode module are electrically connected to the circuit board proximate to.

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Claim Chart for Claims 180-181 of 10/766,488

Ref	Title	Distinction between reference(s) and claim(s)
A1	USP4,432,604	A1 does not disclose, at least, an optical module
		comprising a laser diode module to convert a laser
		diode electrical signal into a laser diode optical
		signal and transmit the laser diode optical signal.
A2	USP4,553,813	A2 through A4 do not disclose, at least, an optical
A3	USP4,612,670	module comprising a laser diode electrical signal
A4	USP4,625,333	converter to convert serial data, received from a
		serial connector, into a laser diode electrical signal.
A5	USP4,737,008	A5 does not disclose, at least, an optical module
		comprising a laser diode module to convert a laser
		diode electrical signal into a laser diode optical
		signal and transmit the laser diode optical signal.
A6	USP4,911,519	A6 does not disclose, at least, an optical module
		comprising a single circuit board on which a serial
		connector and a laser diode electrical signal
		converter are mounted, and to which a laser diode
		module and a photo diode module are electrically
		connected.
A7	USP4,912,521	A7 and A8 do not disclose, at least, an optical
A8	USP4,913,511	module comprising a laser diode electrical signal
		converter to convert serial data, received from a
		serial connector, into a laser diode electrical signal.
A9	USP4,945,229	A9 does not disclose, at least, an optical module
		comprising a laser diode module to convert a laser
		diode electrical signal into a laser diode optical
		signal and transmit the laser diode optical signal.
A10	USP4,969,924	A10 and A11 do not disclose, at least, an optical
A11	USP4,979,787	module comprising a single circuit board on which
		a serial connector and a laser diode electrical signal
		converter are mounted, and to which a laser diode
		module and a photo diode module are electrically
		connected.
A12	USP5,013,247	A12 through A16 do not disclose, at least, an
A13	USP5,039,194	optical module comprising a laser diode electrical
A14	USP5,047,835	signal converter to convert serial data, received
A15	USP5,099,307	from a serial connector, into a laser diode electrical
A16	USP5,113,466	signal.

Ref	Title	Distinction between reference(s) and claim(s)
B1	USP5,127,071	B1 and B2 do not disclose, at least, an optical
B2	USP5,202,943	module comprising a laser diode electrical signal converter to convert serial data, received from a

Г	-	serial connector, into a laser diode electrical signal.
B3	USP5,243,678	B3 and B4 do not disclose, at least, an optical
B4		module comprising a laser diode module to convert
1	TIODS 290 101	a laser diode electrical signal into a laser diode
	USP5,280,191	optical signal and transmit the laser diode optical
		signal.
B5		B5 does not disclose, at least, an optical module
		comprising a single circuit board on which a serial
	USP5,289,345	connector and a laser diode electrical signal
	031 3,267,343	converter are mounted, and to which a laser diode
		module and a photo diode module are electrically
		connected.
B6_	USP5,325,454	B6 through B10 do not disclose, at least, an optical
B7	USP5,325,455	module comprising a laser diode electrical signal
B8	USP5,337,398	converter to convert serial data, received from a
B9	USP5,432,630	serial connector, into a laser diode electrical signal.
B10	USP5,452,388	
B11		This reference does not qualify as prior art.
	USP5,475,783	Applicants have claimed priority to Japanese
	051 3,473,763	Application No. 06-086691, filed on April 25,
		1994, in Japan.
B12	USP5,515,468	B12 and B13 do not disclose, at least, an optical
B13		module comprising a laser diode electrical signal
	USP5,526,160	converter to convert serial data, received from a
		serial connector, into a laser diode electrical signal.
B14		This reference does not qualify as prior art.
	USP5,535,034	Applicants have claimed priority to Japanese
		Application No. 06-086691, filed on April 25,
		1994, in Japan.
B15		B15 does not disclose, at least, an optical module
τ	USP5,550,941	comprising a laser diode module to convert a laser
		diode electrical signal into a laser diode optical
Dic		signal and transmit the laser diode optical signal.
B16		This reference does not qualify as prior art.
	USP5,561,727	Applicants have claimed priority to Japanese
		Application No. 06-086691, filed on April 25,
		1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
C1	USP5,604,831	C1 and C2 do not disclose, at least, an optical
C2	USP4,727,248	module comprising a laser diode module to convert a laser diode electrical signal into a laser diode optical signal and transmit the laser diode optical signal.
C3	USP5,528,408	This reference does not qualify as prior art.

		Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25,
		1994, in Japan.
C4	USP5,276,756	. C4 through C8 do not disclose, at least, an optical
C5	USP5,376,182	module comprising a laser diode electrical signal
C6	USP5,422,972	converter to convert serial data, received from a
C7	USP5,644,668	serial connector, into a laser diode electrical signal.
C8	USP5,993,074	·
C9	USP5,561,727	C9-C11 do not qualify as prior art. Applicants have
C10	JP7-225327	claimed priority to Japanese Application No. 06-
C11	JP7-225328	086691, filed on April 25, 1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
D1	Hewlett-Packard, Optoelectronics Designer's Catalog, 1990.	D1 through D3 do not disclose, at least, an optical module comprising a laser diode module to convert
D2	Sumitomo Electric Fiber Optics Corp., Product Bulletin, FDDI Optical Transceiver, ES-9217-XC, publication date unknown.	a laser diode electrical signal into a laser diode optical signal and transmit the laser diode optical signal.
D3	Sumitomo Electric, Technical Specification for FDDI Optical Transceiver Module, ES- 9217-XC, SC Duplex FDDI PMD, ES- 9210-XC, SC Duplex LCF PMD, March 25, 1993.	
D4	Proposal for Multi-Chip Integration submitted to the Advanced Research Projects Agency dated May 11, 1993, publication date unknown.	D4 does not disclose, at least, an optical module comprising a laser diode electrical signal converter to convert serial data, received from a serial connector, into a laser diode electrical signal.
D5	Thomas & Betts, INFO-LAN Fiber Optic Map Network (IEEE 802.4) Users Manual, August 1988.	D5 through D7 do not disclose, at least, an optical module comprising a laser diode module to convert a laser diode electrical signal into a laser diode
D6	IBM Opto-Electronics Enterprise, RCL-2000 LCF-PMD FDDI, Preliminary Specifications, Jan. 7, 1993.	optical signal and transmit the laser diode optical signal.
D7	Hewlett-Packard, FDDI 1300nm Transceiver, Technical Data, HFBR-5125, 1991.	
D8	Daniel J. Wasser, Optical Datalinks, AT&T Technical Journal, p.46-52, January/February, 1992	D8 does not disclose, at least, an optical module comprising a laser diode electrical signal converter to convert serial data, received from a serial connector, into a laser diode electrical signal.

Claim Chart for Claims 182-183 of 10/766,488

Ref	Title	Distinction between reference(s) and claim(s)
A1	USP4,432,604	Al through Al6 do not disclose, at least, a module
A2	USP4,553,813	cap comprising a first cap portion and a second cap
A3	USP4,612,670	portion to protect a laser diode module and a photo

A4	USP4,625,333	diode module of an optical module, respectively,
A5	USP4,737,008	such that the first cap portion and the second cap
A6	USP4,911,519	portion are each formed having a cavity with a
A7	USP4,912,521	projection formed therein, and into each of the
A8	USP4,913,511	cavities one of a laser diode module and a photo
A9	USP4,945,229	diode module is at least partially inserted when the
A10	USP4,969,924	module cap is attached to the optical module.
A11	USP4,979,787	
A12	USP5,013,247	
A13	USP5,039,194	
A14	USP5,047,835	
A15	USP5,099,307	
A16	USP5,113,466	

Ref	Title	Distinction between reference(s) and claim(s)
B1	USP5,127,071	B1 through B10 do not disclose, at least, a module
B2	USP5,202,943	cap comprising a first cap portion and a second cap
B3	USP5,243,678	portion to protect a laser diode module and a photo
B4	USP5,280,191	diode module of an optical module, respectively,
B5	USP5,289,345	such that the first cap portion and the second cap
B6	USP5,325,454	portion are each formed having a cavity with a
B7	USP5,325,455	projection formed therein, and into each of the
B8	USP5,337,398	cavities one of a laser diode module and a photo
B9	USP5,432,630	diode module is at least partially inserted when the
B10	USP5,452,388	module cap is attached to the optical module.
B11	USP5,475,783	This reference does not qualify as prior art. Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.
B12	USP5,515,468	B12 and B13 do not disclose, at least, a module cap
B13	USP5,526,160	comprising a first cap portion and a second cap portion to protect a laser diode module and a photo diode module of an optical module, respectively, such that the first cap portion and the second cap portion are each formed having a cavity with a projection formed therein, and into each of the cavities one of a laser diode module and a photo diode module is at least partially inserted when the module cap is attached to the optical module.
B14	USP5,535,034	This reference does not qualify as prior art. Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.
B15	USP5,550,941	B15 does not disclose, at least, a module cap

		comprising a first cap portion and a second cap portion to protect a laser diode module and a photo diode module of an optical module, respectively, such that the first cap portion and the second cap portion are each formed having a cavity with a projection formed therein, and into each of the cavities one of a laser diode module and a photo diode module is at least partially inserted when the module cap is attached to the optical module.
B16	USP5,561,727	This reference does not qualify as prior art. Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
C1	USP5,604,831	C1 and C2 do not disclose, at least, a module cap
C2	USP4,727,248	comprising a first cap portion and a second cap portion to protect a laser diode module and a photo diode module of an optical module, respectively, such that the first cap portion and the second cap portion are each formed having a cavity with a projection formed therein, and into each of the cavities one of a laser diode module and a photo diode module is at least partially inserted when the module cap is attached to the optical module.
C3	USP5,528,408	This reference does not qualify as prior art. Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.
C4	USP5,276,756	C4 through C8 do not disclose, at least, a module
C5	USP5,376,182	cap comprising a first cap portion and a second cap
C6	USP5,422,972	portion to protect a laser diode module and a photo
C7	USP5,644,668	diode module of an optical module, respectively,
C8	USP5,993,074	such that the first cap portion and the second cap portion are each formed having a cavity with a projection formed therein, and into each of the cavities one of a laser diode module and a photo diode module is at least partially inserted when the module cap is attached to the optical module.
C9	USP5,561,727	C9-C11 do not qualify as prior art. Applicants have
C10	JP7-225327	claimed priority to Japanese Application No. 06-
C11	JP7-225328	086691, filed on April 25, 1994, in Japan.

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Ref	l litla	
1 1/61	1 1146	Distinction between reference(s) and claim(s)
	,	

D1	Hewlett-Packard, Optoelectronics Designer's Catalog, 1990.	D1 through D8 do not disclose, at least, a module cap comprising a first cap portion and a second cap
D2	Sumitomo Electric Fiber Optics Corp., Product Bulletin, FDDI Optical Transceiver, ES-9217-XC, publication date unknown.	portion to protect a laser diode module and a photo diode module of an optical module, respectively, such that the first cap portion and the second cap
D3	Sumitomo Electric, Technical Specification for FDDI Optical Transceiver Module, ES- 9217-XC, SC Duplex FDDI PMD, ES- 9210-XC, SC Duplex LCF PMD, March 25, 1993.	portion are each formed having a cavity with a projection formed therein, and into each of the cavities one of a laser diode module and a photo diode module is at least partially inserted when the
D4	Proposal for Multi-Chip Integration submitted to the Advanced Research Projects Agency dated May 11, 1993, publication date unknown.	module cap is attached to the optical module.
D5	Thomas & Betts, INFO-LAN Fiber Optic Map Network (IEEE 802.4) Users Manual, August 1988.	
D6	IBM Opto-Electronics Enterprise, RCL-2000 LCF-PMD FDDI, Preliminary Specifications, Jan. 7, 1993.	
D7	Hewlett-Packard, FDDI 1300nm Transceiver, Technical Data, HFBR-5125, 1991.	·
D8	Daniel J. Wasser, Optical Datalinks, AT&T Technical Journal, p.46-52, January/February, 1992	

Claim Chart for Claim 184 of 10/766,488

Ref	Title	Distinction between reference(s) and claim(s)
Al	USP4,432,604	Al through Al6 do not disclose, at least, a module
A2	USP4,553,813	cap comprising a laser diode projection formed in a
A3	USP4,612,670	laser diode cavity and a photo diode projection
A4	USP4,625,333	formed in a photo diode cavity, such that the
A5	USP4,737,008	module cap is formed having the laser diode cavity
A6	USP4,911,519	into which a laser diode module is at least partially
A7	USP4,912,521	inserted and the photo diode cavity into which a
A8	USP4,913,511	photo diode module is at least partially inserted.
A9	USP4,945,229	
A10	USP4,969,924	
A11	USP4,979,787	
A12	USP5,013,247	
A13	USP5,039,194	
A14	USP5,047,835	
A15	USP5,099,307	
A16	USP5,113,466	

Ref	Title	Distinction between reference(s) and claim(s)
B1	USP5,127,071	B1 through B10 do not disclose, at least, a module
B2	USP5,202,943	cap comprising a laser diode projection formed in a
B3	USP5,243,678	laser diode cavity and a photo diode projection
B4	USP5,280,191	formed in a photo diode cavity, such that the
B5	USP5,289,345	module cap is formed having the laser diode cavity
B6	USP5,325,454	into which a laser diode module is at least partially
B7	USP5,325,455	inserted and the photo diode cavity into which a
B8	USP5,337,398	photo diode module is at least partially inserted.
B9	USP5,432,630	
B10	USP5,452,388	
B11	USP5,475,783	This reference does not qualify as prior art. Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.
B12	USP5,515,468	B12 and B13 do not disclose, at least, a module cap
B13	USP5,526,160	comprising a laser diode projection formed in a laser diode cavity and a photo diode projection formed in a photo diode cavity, such that the module cap is formed having the laser diode cavity into which a laser diode module is at least partially inserted and the photo diode cavity into which a photo diode module is at least partially inserted.
B14	USP5,535,034	This reference does not qualify as prior art.

		Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.
B15	USP5,550,941	B15 does not disclose, at least, a module cap comprising a laser diode projection formed in a laser diode cavity and a photo diode projection formed in a photo diode cavity, such that the module cap is formed having the laser diode cavity into which a laser diode module is at least partially inserted and the photo diode cavity into which a photo diode module is at least partially inserted.
B16	USP5,561,727	This reference does not qualify as prior art. Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
C1	USP5,604,831	C1 and C2 do not disclose, at least, a module cap
C2		comprising a laser diode projection formed in a
		laser diode cavity and a photo diode projection
		formed in a photo diode cavity, such that the
	USP4,727,248	module cap is formed having the laser diode cavity
ł		into which a laser diode module is at least partially
		inserted and the photo diode cavity into which a
		photo diode module is at least partially inserted.
C3		This reference does not qualify as prior art.
	USP5,528,408	Applicants have claimed priority to Japanese
	051 3,320,400	Application No. 06-086691, filed on April 25,
		1994, in Japan.
C4	USP5,276,756	C4 through C8 do not disclose, at least, a module
C5	USP5,376,182	cap comprising a laser diode projection formed in a
C6	USP5,422,972	laser diode cavity and a photo diode projection
C7	USP5,644,668	formed in a photo diode cavity, such that the
C8		module cap is formed having the laser diode cavity
	USP5,993,074	into which a laser diode module is at least partially
	0010,770,074	inserted and the photo diode cavity into which a
		photo diode module is at least partially inserted.
<u>C9</u>	USP5,561,727	C9-C11 do not qualify as prior art. Applicants have
C10	JP7-225327	claimed priority to Japanese Application No. 06-
C11	JP7-225328	086691, filed on April 25, 1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
D1	Hewlett-Packard, Optoelectronics Designer's Catalog, 1990.	D1 through D8 do not disclose, at least, a module cap comprising a laser diode projection formed in a
D2	Sumitomo Electric Fiber Optics Corp., Product Bulletin, FDDI Optical Transceiver, ES-9217-XC, publication date unknown.	laser diode cavity and a photo diode projection formed in a photo diode cavity, such that the module cap is formed having the laser diode cavity
D3	Sumitomo Electric, Technical Specification for FDDI Optical Transceiver Module, ES- 9217-XC, SC Duplex FDDI PMD, ES- 9210-XC, SC Duplex LCF PMD, March 25, 1993.	into which a laser diode module is at least partially inserted and the photo diode cavity into which a photo diode module is at least partially inserted.
D4	Proposal for Multi-Chip Integration submitted to the Advanced Research Projects Agency dated May 11, 1993, publication date unknown.	
D5	Thomas & Betts, INFO-LAN Fiber Optic Map Network (IEEE 802.4) Users Manual, August 1988.	
D6	IBM Opto-Electronics Enterprise, RCL-2000 LCF-PMD FDDI, Preliminary Specifications, Jan. 7, 1993.	
D7	Hewlett-Packard, FDDI 1300nm Transceiver, Technical Data, HFBR-5125, 1991.	
D8	Daniel J. Wasser, Optical Datalinks, AT&T Technical Journal, p.46-52, January/February, 1992	

Claim Chart for Claim 185 of 10/766,488

Ref	Title	Distinction between reference(s) and claim(s)
A1	USP4,432,604	A1 through A16 do not disclose, at least, a module
A2	USP4,553,813	cap comprising a laser diode projection formed in a
A3	USP4,612,670	laser diode cavity and a photo diode projection
A4	USP4,625,333	formed in a photo diode cavity.
A5	USP4,737,008	·
A6	USP4,911,519	·
A7	USP4,912,521	
A8	USP4,913,511	
A9	USP4,945,229	
A10	USP4,969,924	
A11	USP4,979,787	·
A12	USP5,013,247	
A13	USP5,039,194	
A14	USP5,047,835	
A15	USP5,099,307	
A16	USP5,113,466	

Ref	Title	Distinction between reference(s) and claim(s)
B1	USP5,127,071	B1 through B10 do not disclose, at least, a module
B2	USP5,202,943	cap comprising a laser diode projection formed in a
B3	USP5,243,678	laser diode cavity and a photo diode projection
B4	USP5,280,191	formed in a photo diode cavity.
B5	USP5,289,345	
B6	USP5,325,454	
B7	USP5,325,455	
B8	USP5,337,398	
В9	USP5,432,630	_
B10	USP5,452,388	
B11	USP5,475,783	This reference does not qualify as prior art. Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.
B12	USP5,515,468	B12 and B13 do not disclose, at least, a module cap
B13	USP5,526,160	comprising a laser diode projection formed in a laser diode cavity and a photo diode projection formed in a photo diode cavity.
B14	USP5,535,034	This reference does not qualify as prior art. Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.
B15	USP5,550,941	B15 does not disclose, at least, a module cap

		comprising a laser diode projection formed in a laser diode cavity and a photo diode projection formed in a photo diode cavity.
B16	USP5,561,727	This reference does not qualify as prior art. Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
C1	USP5,604,831	C1 and C2 do not disclose, at least, a module cap
C2	USP4,727,248	comprising a laser diode projection formed in a laser diode cavity and a photo diode projection formed in a photo diode cavity.
C3	USP5,528,408	This reference does not qualify as prior art. Applicants have claimed priority to Japanese Application No. 06-086691, filed on April 25, 1994, in Japan.
C4	USP5,276,756	C4 through C8 do not disclose, at least, a module
C5	USP5,376,182	cap comprising a laser diode projection formed in a
C6	USP5,422,972	laser diode cavity and a photo diode projection
C7	USP5,644,668	formed in a photo diode cavity.
C8	USP5,993,074	
C9	USP5,561,727	C9-C11 do not qualify as prior art. Applicants have
C10	JP7-225327	claimed priority to Japanese Application No. 06-
C11	JP7-225328	086691, filed on April 25, 1994, in Japan.

Ref	Title	Distinction between reference(s) and claim(s)
D1	Hewlett-Packard, Optoelectronics Designer's Catalog, 1990.	D1 through D8 do not disclose, at least, a module cap comprising a laser diode projection formed in a
D2	Sumitomo Electric Fiber Optics Corp., Product Bulletin, FDDI Optical Transceiver, ES-9217-XC, publication date unknown.	laser diode cavity and a photo diode projection formed in a photo diode cavity.
D3	Sumitomo Electric, Technical Specification for FDDI Optical Transceiver Module, ES- 9217-XC, SC Duplex FDDI PMD, ES- 9210-XC, SC Duplex LCF PMD, March 25, 1993.	·
D4	Proposal for Multi-Chip Integration submitted to the Advanced Research Projects Agency dated May 11, 1993, publication date unknown.	·
D5	Thomas & Betts, INFO-LAN Fiber Optic Map Network (IEEE 802.4) Users Manual, August 1988.	
D6	IBM Opto-Electronics Enterprise, RCL-	

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D7	Hewlett-Packard, FDDI 1300nm
	Transceiver, Technical Data, HFBR-5125,
	1991.
D8	Daniel J. Wasser, Optical Datalinks, AT&T
	Technical Journal, p.46-52,
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